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Established in 1861

THE AMERICAN BEE JOURNAL

Oldest Bee-Paper in America.

Vol. XXII. Chicago, Ill., January 6, 1886. No. 1.

American
Established in 1861
Oldest Bee Paper in America
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN AND SON,
PUBLISHERS,
923 & 925 WEST MADISON-ST, CHICAGO, ILL.
At One Dollar a Year.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the P.O. as Second-Class matter.

TO CORRESPONDENTS.

The Subscription Price of the Weekly Bee Journal is One Dollar a year.—New Subscriptions can begin at any time. Single Copies, five cents each.

OUR NEW CLUB RATES are: $1.90 for two copies (to the same or different post-offices); $2.75 for three copies; $3.50 for four copies; and for five or more copies, 80 cents each.

Foreign Postage.—To all countries in the Universal Postal Union: **50** cents extra. To all countries **NOT** in the Universal Postal Union, **$1.00** more than the price of subscription.

Sending Money.—Remit by Express, Post Office Order, Postal Note, or Bank Draft on New York or Chicago. If neither of these can be obtained, Register your Letter, affixing stamps both for postage and registry, and take a receipt for it; Money, sent thus, is AT OUR RISK, otherwise, it is not. Do not send checks on local banks, which cost us 25 cents each, at the banks here, to get them cashed.

Postage Stamps of any denomination may be sent for fractions of a dollar; or where Money Orders cannot be obtained, stamps for any amount may be sent.

Subscription Credits.—The receipt for money sent us will be given on the address-label of every paper. If not given in two weeks after sending the money, write to us, for something must be wrong. Do not wait for months or years, and then claim a mistake. The subscription is paid to the END OF THE MONTH indicated on the wrapper-label. This is a continual statement of account.

Advertisements for the next Weekly Bee Journal must reach this office by the Saturday of the previous week.

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A Blue Mark on this paragraph indicates that you are in arrears for subscription to the Bee Journal from the date printed on the address-label attached to the wrapper of this paper. If there is a blue mark on this, it is to request that you send us a remittance to cover the past at $2.00 per year; and, if possible, add one dollar to pay for 1886.

Any person not a subscriber, receiving a copy of this paper, will please consider it an invitation to become a subscriber to it.

ADVERTISING RATES,

20 cents per line of space, each insertion.

A line of this type will admit about **7** words. ONE INCH will contain TWELVE lines.

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Editorial Notices, 50 cents per line.

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Discounts are as follows: on **10 lines** and upward, 3 insertions, 5 ℔ cent.; 6 insertions, 10 ℔ cent.; 9 insertions, 15 ℔ cent.; 12 insertions, 20 ℔ cent.; 26 insertions, 30 ℔ cent.; 52 insertions, 40 ℔ cent.

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TO CORRESPONDENTS.

The Bee Journal is sent to subscribers until an explicit order is received by the publishers for its discontinuance, and the payment of all arrearages is made.

To Canadians.—We take Canadian money for subscription or books; and Canadian postage stamps may be sent for fractions of a dollar.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Never send Silver in Letters. It will wear holes in the envelope, or be stolen.

Emerson Binders, made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, postpaid, for 75 cents each. They cannot be sent by mail to Canada.

Make all Money Orders and Postal Notes payable at Chicago, Ills.—Some postmasters in the country insist on making such payable at some sub-station of Chicago, but we want them drawn on the *main office*.

Lost Numbers.—We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premiums for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents. Leather **60** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we print on them the honey-producer's name and address FREE.

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Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject: suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

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Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

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Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

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Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Constitution and By-Laws, for local Associations, **$2** per 100. The name of the Association printed in the blanks **50c.** extra.

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

How to Propagate and Grow Fruit, by Charles A. Green, contains over 50 illustrations and two colored fruit plates. It contains 64 pages. Price, **25** cents.

Previous to the publication of this book, there was no work on the propagation of small and large fruits which could be purchased for less than $3.00, therefore the masses have been without a guide in this important branch of fruit-growing, and know very little about propagating. The price of the book places it within the reach of all. Further than this, the book gives the latest and most approved methods found in no other publication.

This book tells HOW TO PROPAGATE Strawberries, black raspberries, red raspberries, blackberries, currants, gooseberries, grapes, quince, peach, apricot, plum, cherry, pear and apple; also GENERAL RULES for propagation, with illustrations showing how to bud, how to graft, how to propagate from layers, stools, inarching, with full instructions for grafting the grape. It tells how to lay out a garden or fruit farm—how to plant, cultivate trim, etc.

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The A B C of Carp Culture, is a neat pamphlet of about 100 pages. It explains the simplest, cheapest and most effective system of carp culture, and being written by Mr. Milton P. Pierce, of Philadelphia, Pa., Secretary of the American Carp Cultural Association, it cannot fail to be of inestimable value to all interested in the "finny tribes." Price, **40** cents.

The A B C of Potato Culture; "how to grow them in the largest quantity, and of the finest quality, with the least expenditure of time and labor." The book is not only a valuable one to potato-growers, but a great part of it applies to the management of almost any crop on the farm, especially to the preparation of the soil, manures, etc. Price, **40** cents.

"Farmer's Account Book," contains 166 pages, printed on writing paper, ruled and bound, and the price is $3.00. We will club it and the Weekly BEE JOURNAL for a year for **$3.00.** If you want it sent by mail, add 20 cents for postage.

Phenol for the Cure of Foul Brood.—By Prof. Frank R. Cheshire, of London, England. Price **10** cents; 32 pages.

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. Price, for the Weekly or Monthly, **75 cents** each. They cannot be sent by mail to Canada.

Photographs of Rev. L. L. Langstroth, Baron of Berlepsch, or Dzierzon, **25** c. each.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100. Large and elegant ones, with rosette, **50** cents, post-paid.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Jan. 6, 1886. No. 1.

A Bright New Year, and a sunny track,
  Along an upward way,
And a song of praise on looking back,
  When the year has passed away,
And golden sheaves, not small nor few !
This is our New Year's wish for you !

The Year 1886 has come, and with this issue the AMERICAN BEE JOURNAL commences a new Volume. During the past year we have endeavored to conduct the BEE JOURNAL with a view of doing the "greatest good to the greatest number"—never losing sight of the interests of producers as well as consumers. The past must be the guaranty for the future. Our motto is "Excelsior," and "progress" and "improvement" are our *watchwords.* The price of the JOURNAL is reduced to one dollar a year, but it will not be any less valuable to its readers, nor will any less expense be incurred in its production. The entire gain will be to its patrons, and they are appreciating this by sending in *more* and *larger* clubs than ever before.

It is to the interest of every bee-keeper that his neighbor bee-keepers are educated especially as to marketing honey, that they may have the honey in attractive shape, and to know its proper selling value before attempting to sell it. This may prevent their spoiling of his market by ruining the prices or disgusting purchasers.

We desire not only that every present subscriber will promptly remit for the coming year, but also that each one will convince his bee-keeping friend or neighbor that it is to *his interest* to join in a club, at least of two, and thus spread the light of its torch, so that so many more may be benefited thereby.

Should Any One get this number of the BEE JOURNAL who does not want to continue taking it, please send us a Postal Card and say so, giving name and address. Do not send the number back, for we have no means of knowing to whom it was sent, if the wrapper-label is gone.

"**Peace** be within thy walls, and prosperity within thy habitations," was written anciently as a salutation—and it is a suitable one for our New Year's salutation to every house into which the JOURNAL shall enter.

The BEE JOURNAL has been favored with prosperity sufficient to allow of its subscription price to be reduced by one-half—and this, too, even in the midst of disaster to many bee-keepers, and for two years a partial (to some, total) failure of the honey crop. While some of the newer bee-papers have ceased to exist on that account, the old standard-bearer of bee-culture has stood like a bulwark against which the storms have beaten, and is still freely acknowledged to be the leading apicultural periodical in the World. It circulates in every State, Territory and Province of North America, as well as in Europe, Asia, and Australia.

Mr. C. J. Sperry, of New London, Minn., died on Dec. 25, 1885, at 5 a.m., aged 55 years, and was buried on Sunday, Dec. 27, with Masonic honors. He was associated with Mr. L. Chandler in business connected with the "North Star" Bee-Hive. He kept bees for many years, and was very enthusiastic. The *Expositor* at New London, Minn., gives the following concerning his life :

> About 1859 Mr. Sperry, with others, settled near Diamond Lake, only to be driven from his home by the merciless savages in the memorable year 1862, but returned thereto in 1865. In 1867 Mr. Sperry became associated with Samuel Adams, Wm. Wright, and Louis Larson in the improvement of the water power here, by the building of the dam and the first mill, still standing on the west side of the river, in the construction of which latter Mr. Sperry's mechanical genius became an indispensable factor, having been confided to his entire management. In this enterprise, while there were occasional changes, Mr. Sperry retained his original one-fourth interest which passes unimpaired to his family.
>
> In his death this community loses one of its most respected citizens ; and the family a wise counsellor and kind father. He repeatedly held important trusts, always accepting them in full realization of the responsibility imposed, and discharging them with conscientious regard to the public welfare. In 1881-82, he was Chairman of the Board of Supervisors for the county, and served also as a Justice of the Peace. He was also the first sheriff of Monongalia county, by appointment of Gov. Ramsey. His family will have the sympathy of their many friends whose loving efforts were so generously bestowed.

Mr. O. M. Brown, of Winchester, Va., died after a short illness on Dec. 14, 1885, of pneumonia, in the 71st year of his age. His son, Mr. J. Few Brown (also an apiarist), writes as follows concerning his father : "He was a very systematic and enthusiastic bee-keeper, and everything about his apiary of 40 colonies is of the very best quality, and in perfect condition, every hive and rack put together with screws and uniform to perfection." His funeral was very largely attended.

The Champlain Valley Bee-Keepers' Association will hold its 12th annual convention at Middlebury, Vt., on Thursday, Jan. 21, 1886. We have received a very neat four-page Programme. Any one interested can get a Programme by addressing the Secretary, Mr. R. H. Holmes, Shoreham, Vt. Premiums are offered for exhibits.

A Correspondent in Iowa writes us that Lizzie Cotton's agent is in his neighborhood selling to the "old fogies," a new strain of bees, which she claims will never produce any drones. Those who know anything about bees will not be *fooled* by such nonsense, but such "agents" only work among those who are ignorant concerning bees. If no drones are produced, how will young queens become fertilized? As soon as the original non drone-producing queen dies (if such existed), the "strain" would have run out—having *strained* itself to death.

James Heddon, Dowagiac, Mich., has placed on our desk the Prospectus of his new book, "Success in Bee-Culture," and Catalogue of Supplies for 1886—30 pages.

The First Convention of the bee-keepers of America was held at Cleveland, Ohio, on March 15, 1860 ; nearly 26 years ago. We have prepared a history of the inception, formation, and organization of the North American Bee-Keepers' Society, together with a digest of the proceedings of all its meetings from its inauguration, with a full report of its last meeting at Detroit, Mich. This we are now publishing in pamphlet form. It will be ready in January, and will be sent postpaid for 25 cents. We will *present* a copy of it to any one sending us a club of two subscribers for one year, with $2.00

We have Received from the Publishers, a copy of Number Five of the new series of Recitations called "THE EUREKA RECITATIONS AND READINGS." It contains over fifty pieces, designed for children from six to fifteen years of age, and also a large collection for adults. Those interested in providing an entertainment should have this collection. Each one contains 128 pages, with nearly one hundred selections, and is bound with a handsome cover, printed in four colors, and will be mailed to any address, postpaid, on receipt of twelve cents in stamps, or one each of the five numbers for fifty cents, by J. S. OGILVIE & Co., the publishers, 31 Rose Street, New York.

Dr. G. L. Tinker, New Philadelphia, O., has sent us a copy of his Price List for 1886, of the "Victor Hive," Sections, Queens, Bees, etc.—16 pages.

It will be Wisdom to invest one dollar for the Weekly AMERICAN BEE JOURNAL for 1886. With its weekly visits every subscriber will be kept posted with all the apicultural news of the day.

New Subscribers are coming in rapidly—for this our thanks are tendered to the friends of the AMERICAN BEE JOURNAL, who are exerting their influence in its behalf. We should thribble our list at the present low rate of *one dollar a year.* It is a popular price, and we find the reduction a popular thing with all bee-keepers.

The American Agriculturist and the Weekly BEE JOURNAL for 1886 will both be sent for $2.25, or with the "Family Cyclopædia" or "Law Book," for $2.65.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Stimulative Feeding.

Query, No. 176.—Sumac blooms 3 weeks after white clover. Is it advisable to practice stimulative feeding between the two crops?—Doc, Missouri.

Not unless the flow from sumac lasts two or three weeks.—W. Z. HUTCHINSON.

No; sumac blooms here about July 10, and the clover does not cease to yield nectar till about this time.—G. L. TINKER.

It would hardly be necessary for so short a time.—A. J. COOK.

Yes; if sumac yields abundantly, and there is a dearth of flowers between white clover and sumac.—C. C. MILLER.

I have never found it so in this locality.—G. M. DOOLITTLE.

We think that this is a mistake; sumac usually blooms during white clover or immediately after. At any rate it would be a mistake to feed a colony if the hive is already full, even if only to stimulate.—DADANT & SON.

It would do no good, in my judgment. You could not increase the field-workers by stimulative feeding in so short a period of time. As you describe the two harvests in your locality, your bees ought to be in the very best condition to reap the sumac harvest.—G. W. DEMAREE.

By no means, in this locality. Before pleurisy-root and red clover filled the "gap" between basswood and buckwheat, boneset, goldenrod, etc., we used to have a complete honey-dearth, and then was the time our queens deposited their greatest number of eggs daily.—JAMES HEDDON.

Material for Packing Hives.

Query, No. 177.—Which of the following is the best for packing bees for winter: wheat, oats, buckwheat or clover chaff; forest leaves or old rags?—J. W.

I should prefer wheat chaff.—W. Z. HUTCHINSON.

I prefer a cellar.—C. C. MILLER.

I use fine, dry basswood sawdust. Next I should choose buckwheat chaff.—G. M. DOOLITTLE.

I presume that clover chaff is a little the best, but I do not think that there is much difference.—A. J. COOK.

Forest leaves; of the four kinds of chaff, there is little difference. As to the old rags, that would depend upon the amount of rags to the pound.—G. L. TINKER.

I prefer cloth of any kind, to anything else. Oat-chaff is the best absorbent, but it retains the moisture more tenaciously than does wheat chaff. I never tried buckwheat chaff.—G. W. DEMAREE.

Woolen rags or waste would probably be best. We use leaves. They are the cheapest and most easily secured here. If chaff is to be used, we would use oat-chaff, or even oat-straw.—DADANT & SON.

If I had not abandoned out-door wintering, I should pack my hives with any one of the materials mentioned that I could get with the least expense and trouble.—JAMES HEDDON.

Dots on Italian Queens.

Query, No. 178.—Are the 2 or 3 little black dots, sometimes found on the upper side of the abdomen of Italian queens, any indication of their purity? If not that, what do they indicate?—W. R.

My best queens have no such dots on them.—G. M. DOOLITTLE.

I think that such dots are not important or significant.—A. J. COOK.

No. They are no sure indication of anything whatever. The purity of a queen cannot always be ascertained by her looks. Look at her bees.—DADANT & SON.

I think not; if they indicate anything it is a trace of black blood. At all events, in those cases where the little black dots amount to black stripes there is no doubt of it.—G. L. TINKER.

I have sometimes thought that they indicated impurity, but I have not observed closely enough to know.—C. C. MILLER.

The little black dots have nothing to do with the purity of Italian queens, unless they are splotches of broken bands around her abdomen. I have noticed that rings or bands indicate impurity of blood in Italian queens, but not so with Cyprian and Syrian queens.—G. W. DEMAREE.

Syrian and Italian Bees.

Query, No. 179.—Is the Syrian strain of bees, or any of its crosses, any improvement upon the Italian bees, in the production of either comb or extracted honey, or as a general-purpose bee?—A. G.

My experience with the Syrians is limited, but I think that I should prefer them crossed with the Italians, to having them pure. I prefer Italians to Syrians.—W. Z. HUTCHINSON.

From my own experience I should say no; but I should not think it full enough to be entitled to much weight. In some localities they may be very valuable.—C. C. MILLER.

Crosses with other races have generally been productive of great vigor and extra working qualities; but often the crosses have not proved more amiable than the average hybrids. With selective drone and queen breeding, I think that the improvement that has been found in many instances may be perpetuated.—G. L. TINKER.

I have tried Syrians and have liked them very much. Not having Italians all the time with them, I could hardly compare them. They do breed faster, and, so far as I have seen, they are as good in every way as Italians.—A. J. COOK.

In my opinion no improvement can be made by crossing the Italian race, except the benefits to be derived from the introduction of fresh blood from other strains of yellow bees; and the same results may be had by crossing Italians with Italians of remote families, with the advantage of having your bees pure.—G. W. DEMAREE.

I early decided not to bring Syrian or Cyprian blood into my apiaries until I could be convinced by the reports of the fraternity at large that they were superior to our best Germans and Italians; consequently, as yet, I know nothing about them from experience.—JAMES HEDDON.

I much prefer the Italian bees to Syrians. A cross between the two might be an improvement, were it not that the cross could not be told from the pure as to its markings, and from this would come utter confusion of the races.—G. M. DOOLITTLE.

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CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre ; ♀ south ; O+ east ; +O west; and this ♂ northeast; ~O northwest; O~ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

The Hibernation of Bees.

DR. G. L. TINKER.

During December I have made numerous observations on this subject, and I conclude that those who say that "bees never hibernate," have overlooked some of the most interesting and important facts bearing on the wintering problem. When the Rev. W. F. Clarke first gave us his theory of hibernation, it seemed to excite the amusement of bee-keepers rather than to cause a sober conviction that it involved any truth worth thinking about. I am now able to say that if we ever expect to winter bees scientifically—perfectly—we must provide them with conditions and surroundings that they may hibernate from the beginning of winter to the time when instinct prompts them to begin breeding; then hibernation must necessarily cease.

My bees begin to breed in February, after the first good flight; sometimes they begin as early as February 1, and again, not until the last of the month. Bees in-doors, or where they are unable to take flight, may not begin breeding till late in March. Early breeding is, therefore, a nominal circumstance, but one which may be delayed indefinitely by taking all bee-bread from the bees. Experience, however, has shown that it is not wise to do this if we expect to get enough bees to secure an early harvest. In this, as in many other things, the chances are that it is the early bird that gets the worm. The correct policy would seem to be to favor early breeding as much as possible, even if we get a great many bees that we shall be obliged to feed for a few days before the expected honey-flow. I have never yet had too many bees in my hives by June 1, and I never expect to have.

To promote early breeding, reason would dictate, and experience has shown, that the bees should be placed in such conditions that we may raise the temperature about them to 50°, and possibly higher, without permitting it to fall back to a low temperature until the bees have become strong in numbers. Whether we can best secure these conditions in a cellar, bee-house, or chaff hive, is still an open question, with the weight of argument against the chaff hive.

Probably few have considered the close relation that exists between vigorous and healthy colonies at the beginning of spring breeding, and the strong colonies that we want on June 1. My belief is, that we shall not be able to winter bees perfectly until we shall master the problem of hibernation—until we shall secure to them that perfect rest in early winter which is conservative of their vital forces, up to the time when they should begin to breed. If they are exhausted in any way before this time, our hopes of strong colonies and tons of honey will be defeated to the extent of that exhaustion.

I believe that I was the first to point out the fact in the columns of the AMERICAN BEE JOURNAL, that restless bees in winter confinement suffer a waste of tissue, and require not only bee-bread, but honey in large amount. With the restlessness and active waste, the bees are weakened and worn out, only too often, before it is time to commence breeding, when, if they had been able to hibernate up to this period, and subsequently had been properly warmed up to aid them in brood-rearing, they would have survived for active service until late in May and June. I have known old bees to survive and do good service until June 15.

What hibernation is, and how it can be secured, will appear from the following:

On the morning of Dec. 7, the temperature in this locality fell to 8° below zero. During the day I carried 17 colonies in single-walled hives into the cellar, which is 25x35x8 feet, has no ventilation, and is perfectly dark. The thermometer registered 41° above zero. About 10 p. m. I went down into the cellar with a lamp to see what they were about. The entrances being large (¾-inch deep), I could see the bees clustered on the bottom of the combs in every hive, and the cluster extended to the bottom-board. They had not a particle of top ventilation and were contracted on from 4 to 7 frames, being mostly on 5 Victor frames. The light was turned up to burn very brightly so that I could see, if possible, their respirations. To my surprise, they all appeared as if dead; they were *entirely motionless*, and the closest examination showed no perceptible respiration. After a few minutes, now and then one would draw its abdomen forward as if disturbed by the light, and then straighten out again; then all was motionless as before. Thus I continued to examine each colony of bees for several minutes, but found after about 10 minutes, with the light shining close and full upon them, that they began to move about, and to respire once or twice at long intervals.

From this time on, I frequently examined them and at all times of the day and night. So long as the temperature remained at 40° to 42° they remained thus undisturbed by the light; but when the temperature was above or below this point, they did not bear the light well, and almost instantly began to move about, and occasionally one would come out of the hive. At 38° and 37° the bees were restless under the light; at 41° they were least so. I then made up my mind that this was the point of temperature at which they most perfectly hibernated.

For a wider range of observations I now went to the colonies out-of-doors; 16 of them were on Gallup frames and were clustered up so high that I could not see them. The balance were on shallow frames and among them were three contracted on 4 and 5 frames in which I had an unobstructed view. None had upward ventilation. On these, the observations were all made after night, using for the purpose a small lantern furnishing a light as bright as the lamp. The weather being variable, I was able to make all needed observations. I found that when the mercury stood at 40° to 42°, the bees were all hibernating and acted the same in all respects as did those in the cellar. At 32° they were impatient of the light; at 20° they were uneasy and many respiring; and at 9° they were restless and moving about lively, as well as respiring. Below 20° all signs of hibernation apparently had ceased. How it was in the double-walled hives I do not know, as I could not see the bees, but I believe that it would take a much lower temperature to interrupt hibernation than in these three single-walled hives.

When the temperature went above 45° the bees began to show signs of activity; at 50° they had ceased to hibernate and began to respire; and at the approach of the light they moved about freely.

My observations three years since were made late—in February—and I now think that the bees were then breeding, as on every occasion they were seen to be respiring, but most of them very slowly. The temperature of the cluster was higher—about 90°—ascertained by a number of tests with a good thermometer. The temperature in the hives now in my cellar, I found to be 54° among the bees at the lower part of the cluster, when the temperature of the cellar was at 40°. The center of the cluster could not have been very much higher than this, so they could not have been breeding. I therefore believe that the thermometer will prove a reliable guide in determining whether the bees are hibernating or breeding at any given time.

Some are inclined to think that the temperature of the bee-cellar should be high—about 50°—all winter. Mr. Doolittle has said that he would consider it a great acquisition if he had a bee-cellar that he could keep at 55° without artificial heat. Now, as a matter of fact, I think that few bee cellars can be kept above 45° without artificial heat; but as a certain degree of cold is essential to hibernation, and that about 41°, what more can we ask? Somehow, I am becoming impressed with the idea that a great part of our wintering troubles comes from upward ventilation in hives. The great success of Mr. Ira Barber, in wintering, may be due to the fact that he gives his bees no top ventilation, and the further fact that his bee cellar will not likely average above 45°; it certainly will not, if he applies no artificial heat.

If the most perfect hibernating conditions exist at 41°, that is the temperature which the bee-cellar should have in early winter. When breeding begins, then artificial means of heating to 50° or 55° will materially aid the bees in their work, and, I am thinking, may come to be an indispensable measure with all progressive apiarists.

New Philadelphia,○+O.

For the American Bee Journal.

Feeding Bees, the Honey Market, etc.

G. W. DEMAREE.

The questions, how to feed bees, when, and how much to feed them, have been thoroughly discussed in all the bee-periodicals; but there is matter of interest connected with this subject that seems to have been overlooked—in fact, neglected. In the past, our fathers knew but little about feeding bees even when they knew that the bees were in a starving condition. I can remember 40 or more years ago, when my father was anxious about his bees, one winter, and feared that some of the "swarms" would starve, and I remember that he fed them loaves of corn bread. The loaves or pones of bread were split in the middle, and then the fresh bread was saturated with sugar syrup, or rather, with wet sugar. The bees pulled through the winter all right, if my memory is not at fault; of course it was mostly the sugar that saved the bees.

It is a fact, that very few people 40 years ago knew that sugar would answer as a substitute for honey, for winter stores for bees. Those bee-keepers who are old enough to remember back through all the years of progress in this science, will agree with me when I say that apiarists at the first fed their bees sugar as a *substitute* for honey; in later years some began to claim that sugar syrup was *as good* as honey for winter stores. This is as far as any of the works on bee-culture have gone, so far as I have examined them on this subject. But now in the last few years, there are some who seem to be interested in sugar, or are carried away by some hallucination beyond the comprehension of most people, who vehemently insist that nothing but sugar syrup is safe food for bees in winter. What are the facts in the case? I have only to ask intelligent bee-keepers to examine the bee-papers for reports of successes and failures in wintering bees during the past hard winter, and form their own judgment. I do not fear the result. The God-given food for bees—*pure honey*—has no superior as a food for bees—or man.

Of course, I do not pretend to say that inferior honey is necessarily better than the purest sugar. Though we should admit that pure sugar is *just as good*, and as *safe* to winter our bees on, there is no good reason why bee-keepers should so forget their own interest as to build up the sugar-trade at the expense of the honey market, and thus bring ruin on the bee-interests of the country. A certain supply-dealer quotes sugar for feeding bees at 7 to 7½ cents per pound, and somewhere else quotes extracted honey as low as 4 cents. Nothing could better illustrate the downward tendency of the honey interests.

I contend that a good article of dark extracted honey, such as is quoted at 4 to 5 cents per pound, is the cheapest and best food for bees that can be had; and it is a suicidal policy to pay a higher price for sugar and have so much cheap honey hanging on the market to drag down the price of the white grades more desirable for table use. I could not be influenced in this matter by immediate personal interest. I produce none but white honey and can sell all I can produce at from 10 to 12½ cents per pound at my honey store-rooms. I speak in behalf of the honey-trade.

Some years ago the glucose fraud threatened the very life of bee-culture. In the first place it appeared as a food for bees. We all know what a determined effort was made to ruin the honey-trade by thrusting glucose in its different forms in the faces of bee-keepers. It required years of persistent exposure of the fraud, to rid the bee-interest of this vile nuisance. And now we are to be beset with the sugar-trade! If the money that has been spent for sugar with which to feed bees, had been laid out for the darker grades of honey, there would have been a lively movement in the honey market, and the lighter grades of honey would have advanced in price, and instead of a dead honey market there would have been a more hopeful feeling among bee-men generally.

I know of but one remedy for our ruined honey market, and that is to stop the sugar business, and feed our bees on their own products. Hereafter I shall buy honey to feed my bees and leave the sugar market to take care of itself. Much has been said about co-operation—let us have a little practical co-operation in this direction. The one hundred thousand dollars or more paid for sugar—much of it adulterated at that—the past fall, would have helped out the dragging honey market surprisingly. It is to be hoped that the practical lessons of the coming winter will be heeded. If I was as sure that contemptible selfishness will not eventually destroy the bee-business, as I am that time will prove that honey is the best food in existence for bees, I would rest content.

REVERSIBLE FRAMES.

I want to say a word about the utility of reversible frames. This idea is likely to be pushed as never before—patent interests will push it regardless of its real merits. Experience of years with a thorough knowledge of practical mechanics may not weigh much with some people, but my advice to beginners is, don't be caught in the trap. Let me here prophesy that when the great "blow" is over, the thousands of reversible frames that are now being pushed into use will stand *unreversed*.

Christiansburg, ♁ Ky.

For the American Bee Journal.

Pollen carried from Flower to Flower.

17—G. M. DOOLITTLE, (40—95).

In a paper published a few years ago, a copy of which I chanced to pick up lately, I found these words: "Pollen is borne from flower to flower on the breeze as well as on the bodies of insects; in fact, that appears to be nature's prime method of conveying the fertilizing germs from the anthers of the staminate to the pointals of the pistillate blossoms." While in another column of the same paper I find this: "Honey is a vegetable production, appearing in greater or less quantities in every flower that nods to the breeze, or kisses the bright sunlight. It is secreted in the flower for the purpose of attracting insects, thus securing the complete fertilization of the female blossom."

Now while both of the above are true in the main, yet when applied to certain plants and trees they are not true; neither is it true that "every flower that nods to the breeze" secretes honey. There are some points in this matter which either I or other writers fail to understand, and as it has a direct bearing on our pursuit (bee-keeping), perhaps a short article to draw others out at this time of lawsuits against our industrious little insects, may not be amiss.

I understand that the first purpose for which the honey-bee was created, was for the fertilization of flowers, while the storage of honey was only for the preservation of the life of the bee, so that the perpetuation of the species might continue for this purpose (fertilization of plants); that man, after a period of time, found that honey was good, and thus utilized the product secreted by the flowers and stored by the bee, to become his food, while the bees perished from such colonies as were robbed by man; that, as the years went by, man learned that the bees would store more honey than their wants required, so surplus apartments were furnished the bees, which were removed when filled, thus leaving enough in the hive or home of the bee to supply all its needs; and that from this surplus came the honey of commerce and our industry of bee-keeping.

If I am correct in the above (and I believe I am), the people of the world have the bee-keepers to thank for bringing the bee from its primeval home (the hollow tree, especially as our forests are being thinned out), and scattering it broadcast throughout the land. to fertilize the millions of flowers which otherwise would produce no fruit.

But to return to the two paragraphs quoted: While I believe that the bees were created for the fertilization of flowers, yet I also believe that not over one-half of the different species of plants and trees require the aid of the bee to fertilize their flowers, and that only those which require the aid of the bee secrete any honey; hence I said that it was not true that every flower secreted honey. In this we see the wisdom of the Creator—bees created to fertilize flowers which could not be fertilized in any other way, and honey placed in these flowers to draw the bees to them. Thus we have the clover among grasses secreting honey, while the timothy, orchard, red top and other grasses do not secrete honey, for they are fertilized by the "breeze."

All the fault I have to find with the first author quoted, is that he represents that both the breeze and the bees may be needed to fertilize the same and all plants; while I believe that plants and trees which can be fertilized by the breeze, do not need the aid of the bees, and that those requiring the aid of the bees cannot be fertilized by all the breezes which ever blew. To be sure, bees collect pollen from many flowers which do not require their aid, but, as I said before, honey is only secreted by those which do. Take the flower of the squash for instance: Gregory, who is certainly good authority, tells us that squashes can only be fertilized bo the aid of bees and insects, and proving the same by giving experiments tried where fine netting was placed over the female flowers on certain hills, when not one of the flowers thus treated produced a squash; while other hills near them gave a good crop. Any one, looking at a squash flower, will at once come to the conclusion that it is impossible for the wind to carry the pollen from one flower to another; hence we find it secreting honey to attract the bees.

Prominent among this class of flowers which needs the bee to fertilize them, we have the clovers, fruit-trees of all classes, basswood or linden, buckwheat, and fall flowers generally. Of the class that does not need the aid of the bee, I will mention grasses of all kinds growing in this locality (except the clover), grain of all kinds (except the buckwheat), and many of the trees in the forest, such as beech, ash, elm, etc. With the grain I would include corn. I know that some writers tell us that bees get honey from corn, but after a careful watch for nearly a score of years, I have failed to find a single bee containing any honey in her honey-sac while at work gathering pollen from corn tassels. If the stalks are bruised or cut in any way, sometimes there is a sweet substance that exudes, which the bees get, but this cannot properly be called the secretion of nectar.

In the above I have given my views regarding the matter, and stand ready to be corrected by any who can show that I am wrong. I am no botanist, therefore I cannot give a scientific article on this subject; but if there are any good botanists among the readers of the AMERICAN BEE JOURNAL, I, and I think that all of its readers, would be pleased to hear from them on this subject.

Borodino,⊙ N. Y.

Read at the Detroit Convention.

Selling and Shipping Bees by the Pound.

E. M. HAYHURST.

The possibility of shipping bees without hives or combs, was first brought to the attention of the bee-keepers by an editorial in *Gleanings* for May, 1879. In this editorial, Mr. Root suggested the use, as a shipping-cage, of a common dish-screen, provided with a wooden bottom and supplied with candy and water. Soon after reading this, I prepared a half-pound of bees and a queen, as thus suggested, and sent them to Mr. Root as an experiment. They were received without the loss of a single bee. This settled the matter with me, that bees could be sent safely in this way, if all the conditions were right.

I sent a number of half and one-pound packages that season, with good success. The dish-screen was soon abandoned for the much more convenient section-box and wire-cloth cage, as advised by Mr. Root in *Gleanings* for June, 1879. Here I would like to call attention to the fact that our common friend, Bro. Root, is father of this business, and that nearly every advancing step made by his now healthy "youngster," has been made at his suggestion.

Without detailing to you the many heavy losses and great discouragements which I met with during the following three years, and owing to which I very nearly abandoned the business as ruinous, I will state that I now have the matter so well under control that it is as safe and profitable to me as any other department of bee-keeping.

I still use the well-known section-cages, each being crated so as to protect it somewhat from accidents. When a number of packages are to be sent to one address, several of them are placed in one crate; I have sent as many as 25 one-pound packages in one crate, but generally I divide large shipments into crates containing 12 or 15 packages. These crates are so arranged as to admit of ample ventilation for each package of bees.

For feed, I use the "Good" candy, made of the best pulverized sugar and clover or basswood honey. This candy enables us to dispense with the water which was necessary with the candies formerly used. When the bees are not likely to be confined more than 24 hours, no feed is really necessary, although a little candy is put into all cages, to guard against possible delays. The proportion used for long distances is about 4 ounces of candy per day for each pound of bees.

I now think that most of my heavy losses in former years were due to over-feeding, or rather, to gorging the bees with honey. I used to be so afraid that they would starve in winter, that I would feed them all the honey that they would take, after they were caged; notwithstanding the well known fact that bees when gorged with sweets are much more likely to become panic-stricken when confined, and disgorging, smother themselves. On the other hand, I now use every precaution possible to prevent the bees from filling themselves while being caged. Bees caged without a queen have this same tendency to panics, and will often run themselves to death; hence I send no more bees without queens.

Next to over-feeding, perhaps the greatest cause of losses is the exposure of the bees to the hot sunshine by the carriers; on this account I place conspicuous cautionary cards on each crate, calling attention to this fact. I also send printed "Directions" attached to each crate, for the benefit of the purchasers, many of whom are quite inexperienced in handling bees; these are very necessary, but do not always save the bees. One friend wrote me this season that I had failed to put queens into 4 or 5 packages sent him; he said: "I know this to be so, because all of the bees clustered in one place." Further correspondence developed the fact that after preparing his five hives as directed, he turned all the bees loose at once by throwing them into the open air, expecting each nucleus with its appropriate queen to find the hive intended for it! Another friend lost 3 out of 5 nuclei by turning them into hives containing their full complement of combs, smeared and befouled by the bees that died during the winter, and without giving them any brood to care for. Only two of the lot had grit enough to stay in their new quarters and clean up.

In regard to the profits to be derived from the business: After an experience of seven years, I believe that when we can retail extracted honey at home for 8 or 10 cents per pound, we cannot afford to retail our bees for less than $3 per pound, in May, and assume all the risks now required of the shipper. Probably the persons most benefited by the business, are those who have trouble in introducing queens, and they are not few; to such it is certainly a very great advantage to buy a half-pound of bees with each queen, so as to enable them to obtain the improved kinds without the risk of introducing. These little nuclei can be made working colonies at once, by giving them 2 or 3 combs of brood and stores (without bees) from other hives. By adding other combs of brood as fast as the bees can care for them, they can be quickly built into full and profitable colonies; indeed 2 or 3 combs of brood and stores, is help enough in ordinary seasons, if the bees are purchased early, and in extra good seasons a half-pound of bees with a good queen will often grow into a fine colony for winter—a small beginning, but not quite so helpless as the one made by one of my neighbors. He sent to me for an untested queen; shortly afterwards he called at my yard and complained that the queen did not do very well—in fact, had deserted her hive. It seems that he had put her with the few bees sent with her in the mailing cage, into a large, cracked box into which he had fastened a one-pound section containing comb, but no honey. He said that there were just 9 bees with her, and that he thought 4 of these were a plenty to stay with the queen while the other 5 went out to gather honey and wax!

At the risk of incurring the charge of being "enthusiastic" in regard to the immense profits to be derived from purchasing bees by the pound, I will close by giving an extract from a letter received from an Iowa customer; it sounds a little extravagant, but it is by no means an uncommon report—he probably had an extra good run of honey. Here it is:

"I kept 11 of those one-pound nuclei, put each into a full-sized chaff hive with empty combs; this is all the help they had, except a little feed when they first came, and a little foundation. They filled up their hives, increased to 20 good, strong colonies, and gave me about 400 pounds of nice comb honey. A swarm from one of them took the first premium ($10) at our District Fair."

Kansas City, Mo.

* * *

For the American Bee Journal.

Northeastern Kansas Convention.

The annual meeting of the Northeastern Kansas Bee-Keepers' Association was held in the Court House at Hiawatha, Kans., on Dec. 11, 1885, Pres. J. W. Margrave in the chair. The minutes of the previous meeting were read and approved, after which experiences in keeping bees were exchanged, which was interesting to all.

Mr. H. J. Ward gave his method of producing comb honey. The colony should first be in good working condition—strong in bees—as soon as possible. He prefers to have them swarm, as he can get more honey from the first or prime swarm than from a colony that does not swarm. He hives the swarm on combs or full sheets of foundation, or puts them in with a weak colony. He places the section-cases on immediately, and uses a slotted honey-board; as but few queens go through the two bee-spaces to lay in the sections, he thinks that a bee-space should not be more than 5-16 of an inch. He uses tin separators, and puts full sheets of foundation in the sections.

Mr. M. J. Dickason said that the production of extracted honey is more profitable than comb honey, as he can get from two to three times as much extracted honey as comb honey, and at no greater expense or labor. By way of example he said that two 2-frame nuclei, being last spring as nearly equal in all conditions as possible, both having productive queens and active workers, were built up and seemed to work with equal vigor; one of them produced 35 pounds of comb honey, which at 20 cents per pound amounts to $7; the other produced 140 pounds of fine extracted honey, which, at 10 cents per pound, amounts to $14, or if retailed at 15 cents per pound, would amount to $21, or three times as much as the first colony.

Mr. J. W. Margrave made a few excellent remarks on marketing honey. He would first try to have the home market consume all that he could produce. Comb honey should be in one-pound sections, and extracted honey in attractive packages from 1 to 10 pounds each, and be peddled the same as market gardeners peddle their produce. When people refuse to buy, he would leave a sample of honey and Leaflets, "Why Eat Honey," and "Honey as Food and Medicine," and then he would be almost sure of a sale the next time. Once a customer, always a customer—if honey is sold at a reasonable price; if held so high as to be considered a luxury, but few sales will be made. He said that bee-keepers should combine and hold honey of the same grade at uniform prices, and prevent a glut of honey in the home markets.

Mr. H. J. Ward does not believe in combinations, and said that only poor honey can glut the market. He sells all the first-class honey that he can produce, at a fixed price, and sells no inferior honey. In this way he has built up a reputation for honest goods, end does not need to reduce his price in order to sell.

Mr. T. B. Dickason, in speaking of wintering bees, said that the best place is the cellar, and that enough is saved by cellar-wintering to more than pay the cost of handling. If no cellar were near, he would raise the hive on a section-case so that if dead bees should fall they would not clog the entrance, and also to give better ventilation. He would invert a honey-board over the hive, place a porous cloth on the honey-board, and then a section-case, and fill the case with leaves or chaff; also give outside protection. He put his bees on shelves in a cellar, so that any one hive could be moved independently of the rest. He raises the hive on a band 2 inches high, and turned the entrances to the wall to exclude light, puts on an inverted honey-board to give double bee-space over the combs, and leaves the hive-cover on if the temperature of the cellar is at 40° or less.

Messrs. J. A. Johnson, J. W. Margrave, C. B. Weaver, and others, protect their bees on the summer stands.

The question arose as to how much honey is needed to winter the average colony, the opinion prevailing that 25 pounds is little enough; and as to best method of increase, natural swarming was prefered.

Mr. C. B. Weaver asked, "In what sized sections is the nicest combs secured?" He favors the 4¼x4¼ and 1½ inches wide.

Messrs. T. B. and M. J. Dickason also prefer that size. They dispense with separators, and get nice, straight, well filled combs, which average about 12 ounces, and more of them are sold at 15 cents than full pound sections at 20 cents. They thought that being narrower, they are filled and sealed much more quickly, and are consequently more salable than combs in 2-inch sections, which are apt to be bulged.

Mr. H. J. Ward uses tin separators and wide sections, and likes them very much. He never used the narrow sections.

An election of officers was then held resulting as follows: President, Hiram J. Ward, of Farmington, Kans; Vice-President, J. A. Johnson, of Everest; Treasurer, T. B. Dickason, and Secretary, M. J. Dickason, of Hiawatha.

A motion then prevailed to send a condensed report of the meeting to the American Bee Journal and to *Gleanings*, after which the convention adjourned to meet upon the call of the executive committee.

M. J. Dickason, *Sec.*

* * *

For the American Bee Journal.

How I Managed my Bees last Season.

JNO. A. THORNTON, (74—108).

On June 1, 1885, I had 74 colonies of bees, some in splendid condition and some in poor condition for honey-gathering. Forty of the best ones were supplied with surplus arrangements for producing comb honey; the balance for extracted honey. Thirty-three of the colonies worked for comb honey cast one swarm each, while only one colony cast a swarm of those that were worked for extracted honey, and that was caused by the removal of their queen and not getting another properly introduced.

The yield of clover honey ceased on July 1, and during the forepart of June the weather was very bad for honey-gathering, so I secured only about 2,000 pounds of white honey; the basswood failed altogether.

During the latter part of August, and until Sept. 1 or 2, it was cool and rainy, but when nice weather came again, the bees commenced work, and filled their brood-chambers and stored 2,000 pounds more of surplus honey of good quality and light in color, and for which I always secure as good a price as for clover honey.

From the 40 colonies worked for comb honey, I secured only 1,800 one-pound sections suitable for market, while from the 34 weak colonies, and increase, were taken something over 2,200 pounds of extracted honey. The swarms were left on the old stands with the brood-combs removed, and supplied with empty frames or full sheets of foundation. Right here let me say that the swarms that were hived on empty frames stored the most honey in the sections, at the first; but when the fall yield came, the ones that were hived on full sheets of foundation, stored almost all the crop in sections, while those swarms that were hived on empty frames stored nearly all the honey below, and built about one-half of their frames full of drone-comb, while the colonies supplied with full sheets of foundation had their frames full of nice worker-comb and clover honey for winter.

I increased my apiary to 108 colonies, which are on the summer stands, and prepared by confining each colony on 5, 6 or 7 combs, with a division-board on each side, and 3 or 4 ½-inch sticks crosswise of the frames on top, with old carpet for covers, and the upper stories half full of leaves or chaff, which completes the inside. The outside packing consists of four sticks 2 feet long, ½x2 inches wide, driven into the ground back of the hive, and filled with straw between them and the hive, with a tight cord around all.

Lima,+o Ills.

For the American Bee Journal.

Bee-Keeping in Central Illinois.

WILLIAM CAMM.

The winter of 1884-85 was a very hard one on bees here. The severe cold weather continued so long without intermission, that bees could not move from the cluster, and so they starved to death after exhausting the honey in the frames upon which they were clustered. My own loss was over half, though I had 59 colonies left out of 113; yet those that survived were so weak that many of them were mere nuclei when the honey season opened in the spring.

There was little honey until June; and by the time bees were strong enough to swarm, the season closed. We had only 3 weeks in which any surplus was gathered, consequently the crop was light. I increased my apiary, by natural swarming, to 96 colonies, and took about 800 lbs. of comb honey and 700 lbs. of extracted honey.

Last winter my bees were well quilted down, but extra frames were not taken out, and many of my hives have 13 or 14 frames. This winter I reduced the larger hives to 8 or 9 frames and packed between the division-boards and the sides of hives with dry leaves. Yesterday, (Dec. 18), bees flew freely from hives faced to the south and a large number of dead ones were thrown out.

Excepting melilot, my experience with honey-plants was not satisfactory this year. Catnip and figwort yielded honey as long as they bloomed, but their season seemed shorter than usual, and where I had taken so much pains to get them set a few years ago, they were scattering and made a poor, stingy growth. Golden honey-plant seemed to gain, but just before it came into bloom the old-fashioned black beetle with white stripes, that destroyed our potatoes forty years ago, came and left only bare stalks. This will probably account for its not being found wild here, as we have a plant on our hills that looks almost exactly like it, and upon which bees work some, although insects injure it; also, they do not kill it as the beetle did Dr. Tinker's favorite.

My honey was all sold upon my local market at a fair price, but this was owing largely to the small quantity produced. There is a demand for all we can produce, but this demand is not effective; that is to say, those who would be our best customers are not able to buy because their wages are not in proportion to their needs.

We could insure good seasons for honey every year, if we could induce the same improvement of the land that has been made in machinery with which to work the land. When we do this we shall employ so much labor upon the land that the demand for honey will be far greater than it now is, and the increased yield of the land would insure the payment of such wages that the demand would be effective. With other industries bee-keeping must share the vicissitudes of climate and social conditions, and with all other industries we are vitally interested in knowing whether we can improve our climate or better our social conditions.

I purchased, over a year ago, a foot-power saw, and have found it a wonderful help to me. I understand filing and setting saws and the use of tools for wood-working generally, so that I may have succeeded better than many others would. At first my saws seemed to wabble slightly and cut rough, but after setting, filing, and finishing with the hone myself, I turned off work that some carpenters refused to believe had not been planed; and from no regular hive factory have I ever received work so smooth, true and exact, as I can get from this saw.

Murrayville, +o Ill.

For the American Bee Journal.

The Honey Season of 1885.

J. M. HAMBAUGH.

My loss of bees last winter was about 30 per cent. I wintered 65 colonies in a house, or enclosure, constructed of straw, slough grass, and fodder. I gave them a flight on Jan. 1, and diarrhea was prevalent among many. I placed them on the summer stands on Feb. 27; there was then but 9 dead colonies, but diarrhea was very prevalent throughout the entire yard, and the snow was soon made as yellow as saffron for quite a distance, from their feces, and a horrible stench arose from the yard. Sealed brood and larvæ was found in many of the hives; and while some made headway in building up, many dwindled away and died, ere the weak could be recruited from the strong colonies, and I have found that it is poor economy to tear down the strong to build up the weak colonies, where the per cent. of weak ones is equal to that of the strong. It is better to double up colonies, where the production of honey is the object in view. Less colonies and more bees is by far the most logical conclusion.

It was about April 1 before the bees gathered their first pollen, which was from soft maple, and the bloom throughout the entire season was about one week later than the season previous, in this locality. While the early harvest was not as rich as last year, the quality was much better, and we were not treated to another scourge of honey-dew, which then was very abundant here.

In order to retrieve my losses to some extent, I bought about 35 colonies of bees in box-hives, and transferred them. The complete upsetting of their household affairs was so great that they did not recover sufficiently to make the season profitable, but I am looking for better results another year.

I commenced the season with about 86 colonies, and with the exception of about 20 colonies, they were in rather poor condition. They increased to 103 colonies, by natural swarming, and I obtained about 3,500 pounds of extracted honey, and 1,000 pounds of comb honey. The largest yield of any one colony was 204 pounds. Italians and hybrids were far in advance for the production of extracted honey. In every instance where the production exceeded 25 pounds, they were pure Italians or hybrids. Eighteen colonies produced upwards of 75 pounds each, and 6 produced over 100 pounds apiece; but to take the entire yard throughout, there was about a half crop harvested. I have Italianized and hybridized the greater portion of my home apiary, and intend to get rid of the blacks another year if possible.

There is a universal complaint of "no honey" this season, here, and because my success looks large in the eyes of some, the cry of adulteration still goes abroad. Will the people never learn that the specialist bee-keeper has great advantages over the old-fogy class?

Spring,+o Ills.

For the American Bee Journal.

The Albino Strain of Bees.

S. VALENTINE.

I notice that in the answers to Query, No. 171, Albino bees are discussed, and Mr. Pond says: "The term 'Albino' is a misnomer, as applied to the bees so-called." I claim that the term "Albino" is as applicable to insects as to animals, and if so, it is appropriate and properly applied to bees. If Mr. Pond will refer to my article on page 199 of the BEE JOURNAL for 1882, on "Albino Bees—Why so Called," he will see why they are called Albinos.

Mr. Harrison, editor of the *American Bee-Keeper* in 1881, asked why all the white hairs turned buff or yellow, when the Albino bees became a few days old; and said that if such was the case, he thought it knocked all the "Albino" out of them. I do not think so, for I cannot see any Albino in such bees to "knock out." I admit that all who use the term "Albino" for yellow, will have some "knocking out" to do, for the term "Albino" was never intended for light-colored Italians.

I keep bees for profit, and work my apiaries for a livelihood. I am not prejudiced against any variety of bees, and whenever I thought there was any advantage in any variety, I was not slow to invest in it. I have spent hundreds of dollars, together with a great deal of time, and many hours of thorough experimenting with bees, and I am satisfied that the Albino bees have the preference.

The Albino queens are very prolific, breeding up early in the spring, and more readily supersede their failing queens. I frequently find both mother and daughter laying in the same hive; the workers are good honey-gatherers, and for beauty and gentleness they are not excelled.

Hagerstown, ⊙ Md.

For the American Bee Journal.

The Secretion of Wax by Bees.

E. B. SOUTHWICK, M. D.

I notice that in the answers to Query, No. 164, nearly all speak as though the will was the supreme power that governs all actions, when the will is but a slave to circumstances regulated by the emotions.

None of those who replied to the Query, gave the proceedings on the part of the bees in secreting wax and making comb, (though doubtless they were all familiar with it), so I will give my description of it, which is as follows:

When bees lack for room to store honey or to rear brood, and have room for more comb, some of the bees fasten themselves at the upper part of this room, in two separate places, then others fasten to them by grasping their bodies or legs, and hanging down others fasten to them, and so on until they form a string—or two strings—as long as they want to commence with; then the lower ends are brought together and held by the bees, thus forming a part of an elongated circle. The younger bees generally do this, not because they are more fit for it, but because the older bees are more fit for something else. The bees that are free then commence feeding those in the string to the utmost of their ability, and to consume this food a very large circulation is caused which brings into action a set of secreting organs similar to our sudorific organs, and they secrete from the circulation a substance that is indigestible and worthless in the system, and throw it out on the surface. These the free bees take off in the form of thin scales, sometimes thicker and sometimes thinner, according to the time the organ has been at work and the amount and quality of the circulation.

When one of these scales is taken off, another commences to form, and so continues as long as the bee is kept in that position and properly fed. That this process is exhaustive—very much doubt, as nothing is taken from the circulation that would strengthen or nourish. These little scales are then made into comb. If they are too thick for the place where the bees want to use them, they draw them out thinner; if too thin, they are pressed together.

Whether the position of the bees helps the secretion or not, I am unable to say; but I think that the forming of the semicircle is for the purpose of having them near where the wax is wanted. When regularly fed, this secretion is thrown off in the feces, and is about all there is of pure honey that is not used in nourishing the system.

Sherman, ⊙ Mich.

For the American Bee Journal.

Bee-Keeping in Florida.

JOHN Y. DETWILER.

Allow me to enquire as to the location, in South Florida, of Mr. H. G. Burnet, whose communication appeared on page 683 of the BEE JOURNAL for 1885. From his communication, I am led to believe that the honey locality of New Smyrna, Volusia Co., is much excelled; for during my residence in Florida I have failed to learn of a locality where the winter can be spent in hiving swarms and extracting honey; except it is from hives that the ants have caused the bees to swarm out, which would necessitate re-hiving them. I should like to hear further from Mr. Burnet, who evidently has a desirable locality, providing he has available transportation for the honey when harvested.

I would say that, in the mangrove belt of Volusia county, the season extends from March until August, with a drouth during April, during which time feeding must be kept up. I have met several individuals who came here believing that bees gather enough honey daily to keep them going during the winter. This is a mistake; and those who ship bees either in full colonies or nuclei should see that each colony has sufficient sealed stores to subsist upon for at least 60 days. Feeding has a tendency to cause robbing, which, in this locality, is to be dreaded, as it frequently causes the entire apiary to become demoralized, except during a honey-flow. If Mr. B. will kindly state the source from which the bees gather honey, and the quality, he will confer a favor, and as well as prevent individuals from coming to Florida to engage in the active duties of the apiary during the winter months, except it be in his locality; for they will certainly be disappointed in the mangrove district of Volusia county.

In this connection I may say that comb honey is very liable to sweat, crack and become sour, from the dampness of the climate, and that those who change their location to any part of Florida, from the North, should take this matter into consideration before making too large an investment in supers and sections for the production of comb honey. To those who come here to "astonish the natives" with their superior skill and abilities, I have nothing to say; to those who are willing to profit by the experience of others, I would say that a little attention given to the methods practiced by resident apiarists will insure success, or at least prevent loss until experience is gained.

New Smyrna, ⊙ Fla.

Convention Notices.

☞ The annual Convention of the Indiana State Bee-Keepers' Society will be held at Indianapolis, Ind., on Jan. 20 and 21, 1886. The meetings of this Society have been very successful in the past, and the coming meeting promises to be still better. The meeting will be held in the rooms of the State Board of Agriculture, and it is one of a series of meetings held by the different Societies of the State, which pertain to the specialties of Agriculture, viz., Dairying, Wool-Growing, Swine-Breeding, Poultry-Raising, etc. Reduced rates are offered at Hotels, and everything possible will be done to make the meeting entertaining and instructive. A very complete program is being prepared, with ample time to discuss the important subjects of particular interest to bee-keepers. A cordial invitation is extended to all bee-keepers, with the hope that they will attend, and thus make the Convention of still greater importance.

FRANK L. DOUGHERTY, *Sec.*

☞ The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Union Hall at Cortland, N. Y., on Jan. 12, 1886, at 10 a.m. It is hoped that all interested in apiculture will make an extra effort to be in attendance at this meeting. Those unable to attend this meeting are requested to send to the Secretary, reports of their apiaries from May 1, 1885, to Dec. 1, 1885.

W. H. BEACH, *Sec.*, Cortland, N. Y.

☞ The next meeting of the Maine Bee-Keepers' Association will be held at Skowhegan, Me., on Jan. 19, 20 and 21, 1886. The Maine Central R. R. will sell tickets at one fare for the round trip. The Grand Trunk R. R. will sell tickets at the same rate to Lewiston, Me., to all who attend the meeting. Bee-keepers everywhere are cordially invited to be present. WM. HOYT, *Sec.*

☞ The Northern Ohio Bee-Keepers' Association will hold a meeting in the Baptist Hall, in Wellington, O., on Friday, Jan. 8, 1886. A special effort will be made to secure a full attendance. H. R. BOARDMAN, *Sec.*

☞ The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Freeport, Ills., on Tuesday, Jan. 19, 1886.

JONATHAN STEWART, *Sec.*

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 21, 1886.

R. H. HOLMES, *Sec.*

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will hold its seventh annual convention at Meadville, Pa., on Wednesday and Thursday, Jan. 20 and 21, 1886. C. H. COON, *Sec.*

☞ The Eastern New York Bee-Keepers' Association will hold its annual convention in Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, January 26—28, 1886. The first session will begin on Tuesday, at 2 p.m. All interested in bee-keeping are requested to attend, and bring apiarian supplies for exhibition. The programme will consist of essays on important subjects, discussions, etc.

E. W. PHILO, *Sec.*

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages)............	$1 00
" 100 colonies (220 pages)............	1 25
" 200 colonies (420 pages)............	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

Local Convention Directory.

1886. *Time and place of Meeting.*

Jan. 8.—Northern Ohio, at Wellington, O.
H. R. Boardman, Sec., E. Townsend, O.

Jan. 12.—Cortland Union, at Cortland, N. Y.
W. H. Beach, Sec., Cortland, N. Y.

Jan. 13—15.—Nebraska State, at Lincoln, Nebr.
W. F. Wright, Sec., Johnson, Nebr.

Jan. 19.—N. W. Ills. & S. W. Wis., at Freeport, Ills.
Jonathan Stewart, Sec., Rock City, Ills.

Jan. 19—21.—Maine, at Skowhegan, Me.
Wm. Hoyt, Sec., Ripley, Me.

Jan. 20, 21.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Jan. 20, 21.—N. E. Ohio & N.W.Pa.,at Meadville,Pa.
C. H. Coon, Sec., New Lyme, O.

Jan. 21.—Champlain Valley, at Middlebury, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Jan. 26—28.—Eastern New York, at Albany, N. Y.
E. W. Philo, Sec., Halfmoon, N. Y.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Testing the Hibernation Theory.—S. McLees, May,○+ Mich., on Dec. 12, 1885, writes :

On Dec. 3 I put 34 colonies of bees in the cellar ; one I left on the summer stand, to test the hibernation theory. One colony increased to six. They gathered 1,200 pounds of honey during the past season. I have given them no upward ventilation. Their combs are well filled with honey, and I left some pollen in each hive. Of the result I will write to the Bee Journal next spring.

Bees in Good Condition.—John Rey, East Saginaw,⊙ Mich., on Dec. 21, 1885, says :

My bees have had a fine flight today, and they appear to be in good condition. They did not spot the snow any, and I think that they will winter better than they did last winter. At least, everything seems to point in their favor, so far.

Good Results—Wintering Bees.—Ezra J. Cronkleton, Dunlap,+○ Iowa, on Dec. 26, 1885, writes :

I commenced the season of 1885 with 10 colonies of bees, increased them to 16, and obtained an average per colony of 108 pounds of surplus honey in one-pound sections. My honey was produced by the wide-frame system, and it was very nice and straight, and all the boxes well filled ; but I shall use the Heddon system next season. As I am a student in apiculture, and not an experimenter, I adopt what I think is best as fast as my judgment dictates that it is best. I have handled bees only two seasons, and I think that I have met with very good success, having made but few blunders. I winter my bees in the cellar, very similarly to Mr. Ira Barber's plan. I was very successful last winter, and my bees are in fine condition so far this winter. I take more trouble upon myself than Mr. Barber teaches, for I lay laths on top of the brood-frames, then a muslin sheet, and then a soft, woolen blanket. After that I put on the surplus arrangement and crowd into it a cushion made of forest leaves, and of course it rests on the blanket ; at last I put on the cap. I keep the temperature at 50°. I take out 2 frames, leaving in 8. This plan is old, but it seems to be successfull.

Bee-Keeping on the Frontier.—Joseph Myers, Alma,♀Nebr., on Dec. 21, 1885, says :

I came to this place in April, 1884, bringing 4 colonies of bees with me. The people here said that they would starve, but in 1884 they increased to 7 colonies, and produced about 75 pounds of excellent honey. I had them in a cave last winter, and they wintered all right. During the past season I have increased them to 12 colonies, but lost 1, so I have only 11, which are in good condition, and I obtained over 100 pounds of honey, some of which I sold for 40 cents per pound. I believe that this will be a good honey country when it once becomes settled with people, and more clover is sown. Bees do well on buckwheat ; I believe it yields more honey here then it does in Illinois, where I came from.

Bees are Quiet.—Titus C. Wilsie, Brandon,○+Wis., on Dec. 28, 1885,says:

I have 10 colonies of bees in the cellar. The past season was a very poor one, and I think that if bees have not been fed considerable for the winter, the loss will be heavy. We have had very warm and pleasant weather for the past week, for this season of the year, but the bees are quiet and appear to be all right. Last winter I put 33 colonies into winter quarters—some in the cellar and some were on the summer stands—but I lost all but 7 of them. I think the cause was diarrhea. The loss of those in the cellar and those out-of-doors would average about the same. Mr. B. Jenkinson, of this place, did not lose a colony out of 48, and he wintered them in the cellar. It is something I cannot quite understand, for my cellar is dry and well ventilated.

Poor Season for Honey.—Dr. H. Besse, Delaware,⊙ O., on Dec. 28, 1885, writes :

My bees are nicely packed away in the cellar and bee-house, where the temperature is from 40° to 46°. I put them in on Nov. 14—133 colonies in all, leaving one colony on its summer stand, as an indicator to let me know when it is time to put the rest out in the spring. This has been a very poor season, so much so that I had to feed my bees over five barrels of sugar in order to furnish them enough stores for winter. The last severe winter destroyed the white clover, and we have no basswood here, so it was the poorest season ever known in this part of the State ; but I hope that we will have a good season next year, for the ground is literally covered with young white clover that will bloom next season. I should not know how to do without the Bee Journal.

The Weather, Cellar-Wintering, etc.—Eugene Secor, Forest City,♁ Iowa, on Dec. 22, 1885, writes :

Winter has come (and gone, apparently). About Dec. 4, the first cold wave reached us, suddenly and severely. The temperature on one or two mornings was as low as 12° below zero. Six to 8 inches of snow fell. The last few days have been mild, the snow is nearly all gone, and the frost is about out of the ground. A part of my bees have been in the cellar seven weeks. The temperature of the cellar is 45° to 50°. It has no ventilation except an inside door occasionally opened at night. My bees have natual stores entirely. Please allow me to congratulate you on the continued excellence of the Bee Journal. The last number, containing so much of interest concerning the late North American Bee-Keepers' Convention was worth more than the sum asked for an entire year's subscription.

Favorable Winter, etc.—13—J. F. Logsden, (55—90), Barton,+○ Md., on Dec. 26, 1885, writes :

The winter so far has been very favorable for the successful wintering of bees in this locality. During the last of October and the first of November I packed 90 colonies with forest leaves, and they are wintering nicely. They all had a nice flight on Dec. 23 and 24 ; to-day the mercury is at 40° Fahr. The past season was rather poor, but I increased my apiary to 90 colonies, and my largest yield from one colony was 160 pounds of extracted honey. My crop consisted of 1,700 pounds of comb honey in boxes, and 1,000 pounds of extracted honey, mostly disposed of in my home market. My average price for comb honey is 17 cents per pound, and for extracted, 14 cents per pound.

The Season of 1885.—Wm. Morse, Rockford,♁ Ills., on Dec. 26, 1885, writes :

I commenced the season with 36 colonies of bees, 18 of which had been wintered in the cellar, and 18 on the summer stands, packed in chaff. Those wintered in the cellar increased to 31 colonies during the season, and produced 542 pounds of honey in one and two-pound sections ; those wintered on the summer stands increased to 36 colonies and ten 3-frame nuclei, and produced 954 pounds of honey. I also obtained from my apiary about 250 pounds of honey in partly-filled sections. In the middle of September I began preparing them for winter, reducing them to 56 colonies and six 3-frame nuclei. I fed them 120 pounds of granulated sugar made into syrup; also the 250 pounds of honey in the partly-filled sections, uncapping what was sealed, and putting the sections on top of the frames. On Oct. 16 I packed them all in chaff, for the winter, on the summer stands. I have recently disposed of all of my bees, fixtures, etc., on account of my advanced age (80 years), poor health, and failing eye-sight.

Bees had a Nice Flight.—J. G. Norton, Macomb,+o Ills., on Dec. 29, 1885, says:

Bees are in fine condition at present. I have 50 colonies that I hope to winter safely in my usual way—with chaff packing. They all had a good flight on Dec. 20.

Bees Wintering Finely.—James Heddon, Dowagiac, ♀ Mich., on Dec. 21, 1885, writes:

Among other wise sayings uttered at the late Convention at Detroit, Mr. Ira Barber said: "The wintering problem is solved." I have no doubt of that fact, and, like Mr. B., I think that the main factor in wintering is temperature; outside of that, the question of food—the question being as to whether or not it be free from nitrogen, *via* floating pollen. Floating pollen would be consumed in any temperature, but pollen in the form of bee-bread, only after exposure to a low temperature. My bees are all passing the winter in apparent quietude and health, and while I hope for successful wintering with those upon natural stores, I feel sure of perfectly wintering those upon stores of all sugar syrup.

Good Yield of Honey.—4—Vira Swartwood, Clearfield, ♀ Iowa, on Dec. 18, 1885, writes:

The last winter left its mark on the bee-keepers here, most of whom lost all, and the rest a part of their bees. We succeeded in saving 16 colonies out of 23 that were packed in dry-goods boxes on the summer stands, and all were in fair condition. They were a month later than usual in building up last spring, and as we have not been accustomed to having white clover around us in sufficient quantity for a honey crop, we made no attempt to get our bees in readiness for one, but to our surprise the few bees that we had, worked early and late during the clover season, bringing in a goodly amount of surplus, and showing us how much might have been gathered had we only been ready for it. The last two weeks in July and the first one in August drained the brood-chambers of all their honey, and the bees took a large amount from the sections for food, making one feel that it would be something to be thankful for if they could just gather enough for their winter-stores. But the remainder of August and the month of September left us satisfied with the result of the honey season for 1885. We sold 2 colonies before the season commenced, and from the remaining 14 we took 1,900 pounds of honey in sections, all nicely capped, and 300 pounds in frames, which we gave them because we ran out of sections, and thought that the season was too nearly gone to get more. Our average from 14 colonies, spring count, was 157 pounds per colony.

Preparing Bees for Winter.—W. Mason, Fillmore,+o Ind., on Dec. 25, 1885, says:

Winter has again returned, and I fear that all the bees are not cared for as they should be. If it is important that the hogs have warm pens, and other stock comfortably quartered for winter, why not the bees, too? But the "pets" are much neglected! On Nov. 19 my bees and hives were all carefully weighed and noted, all colonies being in fair condition. I stored all but one colony in my bee-house on Dec. 5, holding a temperature of 40°. The one left out is to test, if I can, the difference of indoor and out-door wintering. The mercury has not, as yet, marked very low; on Dec. 7 it was 5° below zero. I notice in the last paragraph of my article, on page 744 of the BEE JOURNAL for 1885, that it reads, "I have 2-inch auger holes on either side of the lid for ventilation in winter," etc., instead of, "I have 2 one-inch auger holes on either side of the lid," etc., as I meant to say.

Not Discouraged Yet.—Geo. W. Morris, Cornishville,⊙ Ky., on Dec. 29, 1885, says:

The past season, although the poorest for honey since I commenced bee-keeping 8 years ago, has not yet rid me of all my enthusiasm. I began the season with 17 weak colonies, increased them to 20 strong colonies, and sold $6 worth of queens. My bees are now in good condition for wintering on the summer stands. Although having read several of the best bee-books, yet I am very much indebted to the AMERICAN BEE JOURNAL for my education in bee-culture.

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 4, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.–The market is without special change since last quotations. White comb honey in one-pound sections brings 15@16c. A little fancy sells at 17c. in a small way. Dark comb honey sell slowly. Nearly all of the white comb honey comes from the East. Extracted is held firmly at from 6@8c.

BEESWAX.–25c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.–The market for comb honey is very flat and inactive, which we attribute to the continued warm weather, and prices are ruling correspondingly. We quote as follows: Fancy white comb in 1-lb. paper cartons, 14@15c.; the same in 1-lb. glassed or unglassed sections, 13@14c.; the same in 2-lb. glassed sections, 10½@12c., and in unglassed 2-lbs., 12@13c. Buckwheat honey in 2-lb. sections, 9@10c.; in 1-lb. sections, 11@12c. Extracted–white clover, 6½@8c.; buckwheat, 5½@6½c.

BEESWAX–Prime yellow, 25@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.–The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in 1-lb. packages, ¼ advance on above prices.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.–There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4@8c. a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12@15c. per lb.

BEESWAX.–Good yellow is in good demand, and arrivals are fair, at 20@22c. per lb.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.–The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.–Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.–The demand for honey begins to sag under the present comparatively high prices, and recent warm weather, though choice 1-lb. sections are still scarce and pretty well taken up at 16@17c. We think, however, that the top is reached and any change will be lower prices. Two-lb. sections are selling at 12½@15c. Extracted, dark, 4@6 cts.; white, 7@8c.

BEESWAX.–22½@25c.

CLEMONS, CLOON & Co., cor. 4th & Walnut.

BOSTON.

HONEY.–It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote comb honey in 1-lb. sections at 14@16c., and 2-lb. sections at 12@14c. Extracted, 6@8c.

BEESWAX.–30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.–Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10@12½c.; amber, 7@8c. Extracted, white liquid, 5¼@5½c.; light amber colored, 4½@4¾c.; amber and candied, 4½c.; dark and candied, 4@4½c.

BEESWAX.–Quotable at 23@25c., wholesale.

O. B. SMITH & CO., 423 Front Street.

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for $1.30.

◆

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

◆

When renewing subscriptions please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

◆

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

Many Thanks are due to our friends for sending us so many *new* subscribers, when renewing their own subscriptions. The reduced price for 1886 has caused quite "a boom," and is a *popular* move in every sense of that word. As we do not wish any one to work for nothing, we have concluded to offer premiums for *new* subscribers for 1886, for in order to compensate for the reduction of our price to $1.00, we should at least *thribble* our present subscription list.

For 1 *new* subscriber for a year (besides your own renewal) we will *present* you either of the following books—25 cents each.

For 2 *new* subscribers—any 2 of the books.

For 3 *new* subscribers—all 3 of them; *or* the Western World Guide & Hand-book.

For 4 *new* subscribers—Bees and Honey, ($1.)

Gaskell's Hand-book of Useful Information—a very handy book of 64 pages.

Architecture Simplified; or, How to Build a Dwelling-house, Barn, etc., giving plans, specifications and cost—60 pages.

Look Within for 5,000 facts which every one wants to know—75 pages.

◆

A few Binders for the Monthly (two columns on a page) are left. We will mail them for **30 cents** each, to close them out. They are not large enough for either the Weekly or the Monthly of the present size—three columns on a page.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

◆

The Guide and Hand-Book, is a book of ready reference and an encyclopædia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 16, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for $1.30

◆

Agents can sell the Guide and Hand-Book like "hot-cakes." Send us an order for five copies (with $2.50) and we will send you the Weekly BEE JOURNAL *free* for a year. This is a *rare* opportunity to get the Weekly BEE JOURNAL without cost!!

◆

Lost, from the Michigan State Fair, about Sept. 15, a bee-hive stamped with my trade-mark: "Tefft's Summer and Winter Bee-Hive, with O. K. Reversible Frames." The reward offered is, the hive; that is, if the parties who have it wish to use it. I will send them the balance with instructions how to use it. The hive was a present to Prof. A. J. Cook.—J. W. Tefft, Collamer, N.Y.

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

Advertisements.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

C. B. LEWIS & CO.

51Atf. **WATERTOWN, WIS.**

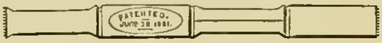
FOR SALE.

EUREKA SAFETY-BOILER AND ENGINE—4 horse-power. Price, **$160.**
Address, **A. A. FRADENBURG,**
52A2t PORT WASHINGTON, OHIO

"BOSS" ONE-PIECE

SECTIONS.

Patented June 28, 1881.


PATENTED JUNE 28 1881.

One-lb. (4¼x4¼) in lots of 500 to 4,000 $5.00
Ditto Ditto 5,000 to 10,000 4.50
Ditto Ditto 10,000 to 25,000 4.00

The one-lb. Section is 17 inches long. For any sizes between 17 and 20 inches in length, add 5 per cent. For any sizes between 20 and 24 inches, add 10 per cent. Add the above per centage to the price of one-lb. Sections in the same quantities.

We make any size or width desired.

J. FORNCROOK & CO.,

BCtf Watertown, Wis., Mar. 1, 1885.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

WEBER'S MAGAZINE OF HUMAN CULTURE

Devoted to Physical, Mental, Moral, and General Self-Improvement, will be sent for the **THREE** next Three months free to any one who says where he saw this, and sends us his address, together with 10 cents to pay postage, etc. Remember that this **MONTHS** chance is not open long and should be accepted at once. We have secured a number of the most able contributors who will supply our colums during 1886 with choice articles upon **FREE** those all-important subjects. It is worth its weight in gold to everybody. Subscription price is only $1.00 per year. Agents wanted everywhere. Address,
M. S. WEBER, Pub.,
1C6t FARMERSVILLE, PA.

60 New Style, Embossed Hidden Name and Chromo Visiting Cards, no 2 alike, name on, 10c., 13 packs $1; warranted best sold. Sample book, 4c. L. JONES & CO., Nassau, N. Y.
11A1y

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

☞ The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for $1.75.

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923 & 925 West Madison St., CHICAGO, ILL.

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS of the **BRISTOL Bee-Hive**, the Standard Hive of Vermont, **Section Honey-Boxes**, all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers**, Shipping **Crates**, Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for illustrated Catalogue and Price-List. 46D12t

HEADQUARTERS IN THE SOUTH

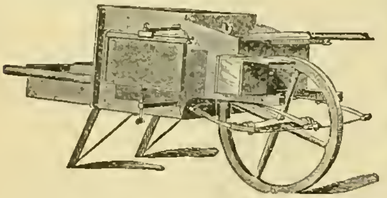
For the manufacture of

Bee-Keepers Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

SYSTEMATIC AND CONVENIENT.



DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Price, complete, only..........$18.00.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

BEE HIVES,

One-piece Sections, Section-Cases, Frames, &c., of superior workmanship.

SMITH & GOODELL,

Manufacturers and dealers in Apiarian Supplies and Barrel Churns. Send for price-list.

Rock Falls, Whiteside Co., Ills.
51D6t.

1886. ALLEY'S 1886.

Combined Drone and Queen Trap.

A perfect non-swarming arrangement. Send and get them by the quantity, in the flat, and sell to your bee-keeping friends. Every bee-keeper will purchase one or more who examines them. Send for wholesale prices. Circulars free.

HENRY ALLEY & CO.,
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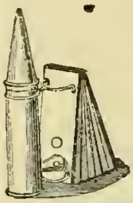
Given's Foundation Press

THE **GIVEN PRESS** stands in the front rank for manufacturing **FOUNDATION in Wired Frames**, as well as foundation for **SECTIONS**. Without a dissenting voice, all of our customers affirm its superiority. Send for Circulars and Samples.

J. R. CALDWELL & CO.,
1ABtf HOOPESTON, Vermillion Co., ILL.



Bee-keepers' Supplies,

Standard Langstroth,

Quinby Standing-Frame,

And all other kinds of **Hives**, MADE TO ORDER.

Quinby Smoker a specialty.

I shall supply anything you need in the Apiary. Send for Illustrated Price List.

W. E. CLARK, successor to L. C. Root,
7A1y ORISKANY, Oneida County, N. Y.

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Entrance Feeders, Top and Bottom Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

J. M. SHUCK,
DES MOINES, IOWA.
10A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,

Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **CHAS. F. MUTH & SON,**
Freeman & Central Ave., - CINCINNATI, O.

☞ Send 10c. for Practical Hints to Bee-Keepers.

BEESWAX.

We pay **24c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

12,000 SOLD SINCE 1876.

13th Thousand Just Out!

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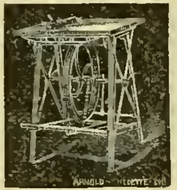
More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1C1y Agricultural College, Mich.

☞ For sale also at the Office of the BEE JOURNAL, at wholesale or retail.

Established 1857
BAKER & CO.
Satisfaction Guaranteed
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
CLARK & MONROE STS.
FOOT BLOCK.
CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES.

BARNES' FOOT-POWER MACHINERY.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 196 Ruby St., Rockford, Ill.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals. and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
Ctf A. I. ROOT, Medina, O.

(ESTABLISHED 1864.)

BEE-SUPPLIES.

We furnish EVERYTHING needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send your address on a Postal card, and we will send you our Illustrated Catalogue free. **E. KRETCHMER,**
2C12t COBURG, IOWA.

BEE-HIVES, SECTIONS,

FOUNDATION, &c.

WITH a capacity of 7,000 square feet of floor, we claim the best facilities for furnishing Supplies in the Southeast. **OUR NEW FACTORY IS EQUIPPED** with the best and latest improved Machinery, which enables us to furnish our goods "up to the times," and will furnish **all kinds at very reasonable prices.** Parties needing Supplies would do well to see our Price-List before buying. Send for Circular and Price-List. Address,

S. VALENTINE & SON, Hagerstown, Md.
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APIARY FOR SALE.

50 **COLONIES OF BEES** in ten-framed Simplicity hives, at **$4.00** each. For further information apply to **G. HILLJE,**
44C3t SCHULENBURG, TEX.

CONDENSED PRICE-LIST
OF
BEE-KEEPERS' SUPPLIES
FOR SALE BY
Thos. G. Newman & Son,
923 & 925 West Madison Street,
CHICAGO, ILLS.

Our Illustrated Catalogue (36 pages) sent *free*, upon application.

LANGSTROTH HIVES.

BROOD chamber with portico and 7⅜ in. cap, 10 frames, nailed, not painted $1.25. Material, in the flat, 95c. each. With movable side, $1.75; in flat, $1.25.

SUPERS for Comb Honey.

STORY (32 1-℔. sections) nailed, 90c. Material, in the flat, 60c.

Story (24 2-℔.) same price as above.

Story (7 wide-frames, with 21 2-℔. sections and separators) nailed, 75c. Material, in the flat, 60c.

Story (7 wide frames, with 56 1-℔. sections and separators) nailed, $1.50. Material, in the flat, $1.05.

Comb-Honey Rack (18 2-℔. sections, separators and glass) nailed $1, flat 50c. Rack without sections, &c. 35c. flat 15c. Rack material, in the flat, by mail. 75c.

DOUBLE-WALLED HIVES

FOR wintering bees on the summer stands. They are made identical and interchangeable with our standard Langstroth hives. All upper stories and surplus arrangements we make, fit this double-walled brood chamber.

Prices: Nailed, 50c.; in the flat, 35c. per hive in addition to our prices of the Standard Langstroth.

We also make our 7⅜-inch caps with a sloping or cottage roof—price 20 cts. nailed and 15 cents flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

HIVE CLAMPS.

FOR securing loose bottom-boards, VanDeusen's, sample set, by mail 15c One or more, by express, 10c. each.
Ackerman's—Sample set, by mail 20c. One or more, by express, 15c. each.

LANGSTROTH FRAMES.

MATERIAL (9⅛x17⅝ in., outside) per 100, $1.50. Per 1000, $14.

SECTIONS for Comb Honey.

ONE-PIECE (Forncrook).—Of these we keep in stock the 4¼x4¼ in. size holding 1 ℔. and 5¼x6¼ inches, holding 2 ℔., a trifle *less* than 2-inches wide, with narrow or wide tops; also, both sizes 1¾ inches wide, with narrow tops.

	4¼x4¼	5¼x6¼
1,000 Sections	$5.00	$5.50
500 "	2.75	3.00
250 "	1.50	1.75
100 "	70	80

Odd sizes, 5x6 or less, (not less than 500 made) $3 for 500; $5.50 per 1,000.

DOVETAILED, four-pieces, 5¼x6¼, wide or narrow tops, and 4¼x4¼ with narrow tops only, (all *scant* 2 in. wide). Prices same as the above.

PRIZE—to be nailed—are of 2-lb. size only. Prices same as the above.

HONEY CARRIAGE,

REVOLVING Comb Hanger, Tool Box and Recording Desk, combined. Price, complete, $18.00.

BARNES' SAWS.

A COMPLETE illustrated catalogue and price-list of these machines will be mailed free, upon application.

EUREKA WIRING TOOL

FOR pressing foundation into wired frames—40 cents; by mail, 50 cts.

ATOMIZER.

TO change the scent of bees when introducing Queens, uniting or dividing colonies, making nuclei, etc. Price, 75c. Mailed for 10c. extra.

SWARM CATCHER.

BAILEY'S swarm catcher consists of a frame-work, made of wood and covered with wire-cloth, which can be set at any angle. By its use, with a queen cage, a swarm can be compelled to stay in any hive, until the swarming-fever is over. Price $6.00.

COMB FOUNDATION.

WE keep three sizes in stock, viz: 12x18, 8x16½, and 10x11 inches. Special sizes, in a week, at same prices, which may be changed without notice.

1 lb., by mail, (small sheets)	70c.
10 " or less, by express, ℔ lb.,	45c.
25 " " " "	44c.
50 " " " "	43c.
100 " " " "	42c.

Thin, *for comb honey,* **10c.** ℔ ℔. *extra.*

Extra Thin, (VanDeusen's *flat-bottomed* or Vandervort's) **20c.** ℔ ℔. *extra.*

Wired, (8x16½ or 10x11 in.) 1 to 25 pounds 65c. ℔ ℔.; 25 to 100 lbs. 63c. ℔ lb.

COMB FOUNDATION MILLS.

WE can furnish any of the Comb Foundation Machines, or the Given press, at manufacturers' prices.

FOUNDATION CUTTER.

Small size (tin wheel)	10c
Large size (steel wheel)	75c

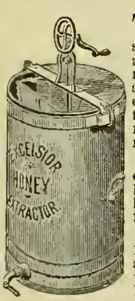
When wanted by mail, add 2 cents to the former, and 5c. to the latter price.

SHIPPING CRATES.

MATERIAL for 50 crates (to hold 12 2-℔. sections) no glass, $5. A sample with sections, complete, 50c.

Material for 50 crates (to hold 24 1 ℔. sections) no glass, $6.50. Sample, 60c.

HONEY EXTRACTORS.



THE **$8** and **$10** sizes are made to suit those who desire a cheap but practical machine. The cans are smaller, the sides of the baskets are stationary, and they have no covers, strainers, or metal standards.

Being made entirely of metal, they are very light and durable, and have lugs for firmly fastening to the floor.

Those who want the BEST honey extractor are referred to those who are now using the Excelsior.

For 2 frames,	13x13	inches	$ 8 00
For 2 "	10x18	"	8 00
For 3 "	10x18	"	10 00
For 4 "	10x18	"	14 00
For 2 "	13x20	"	12 00
For 3 "	13x20	"	12 00
For 4 "	13x20	"	16 00

The 3-frame basket is in a can of the same size and style as the 2-frame. The 4-frame basket is in the larger can; the latter 4 have metal standards for the basket to revolve upon, leaving room underneath the basket for 50 or 80 pounds of honey.

EXCELSIOR Wax Extractor.

WE make two sizes, the smaller one having a larger capacity than the Swiss Wax Extractor. Prices, small size, **$4**; large size, **$5.00.** Some of the advantages of this Extractor are:

1. It is more easily operated, there being no necessity for removing the top to re-fill with water.
2. It melts the wax quicker, because it is brought into a more direct contact with the steam.
3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.
4. The filler for water acts also as an indicator, showing the amount of water in the boiler; when the steam escapes through the filler, more water is required. Keep a kettle of hot water ready to re-fill when required.

SWISS WAX EXTRACTOR.

With copper-bottom boiler	$4 00
Without copper-bottom boiler	3 25

PURE PHENOL.

FOR the cure of **Foul Brood,** used by Mr. Cheshire, of London, England. As it is a liquid, it can be sent only by express. Price, 25c. per oz.

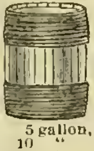
TIN POINTS, for Glassing Sections

SQUARE or **V**-shaped, 1,000, by mail, 50c. By express or freight, 40c.

SHUCK'S BEE-FEEDER.

FOR feeding bees at the entrance of the hive, any time; it feeds much or little, as may be desired; feed can be reached only by the bees from the inside of the hive. Price, by mail, 30c. By express, 25c. each, or $2.40 per doz.

HONEY KEGS.



THESE Kegs are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding rom 300 to 500 lbs each, they are fully as cheap, and often cheaper. They need no waxing, but should be well scalded with boiling water before used. Do not soak them. Prices:

5 gallon,	to hold	50 lbs.	$40c
10 "	"	100 lbs.	60c
17 "	"	175 lbs.	80c

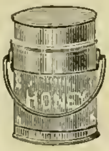
A discount of 10 per cent. on 25, or more; 12½ per cent. on 50, or more; and 15 per cent. on 100, or more, kegs.

LABELS FOR PAILS.

THESE labels are of two sizes, printed on colored paper; they are very attractive, and add greatly to the appearance of the pail when filled and offered for sale. Either size, printed with name and address, at the following prices—(not less than 100 printed):

	Small.	Large.
100	$1 00	$1 00
250	2 00	2 25
500	3 00	3 50
1,000	4 00	5 00

TIN PAILS FOR HONEY.

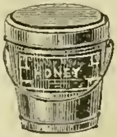


THE Straight Pails of all sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Samples of the 4 sizes, put inside of one another as a nest, price, 50 cts. by express. Prices:

			Per doz.	Per 100
Gallon, holding	10	lbs.	$1 80	$12 00
½ Gallon, "	5	"	1 50	9 00
Quart, "	2½	"	1 20	7 00
Pint, "	1¼	"	65	4 00

THE Tapering Pails of all sizes have a bail, and on the 25-pound pail a wooden handle is added. These tapering pails are made heavier and stronger than those with the straight sides—the covers are deeper and the top edge of the pail is doubled over, making it smooth and convenient to handle.



Samples of the **five** sizes, nested, 75 cents, by express, or the four smaller sizes, 50 cts. Prices:

To hold	1 ℔.	4 lbs.	7 lbs.	13 lbs.	25 lbs
Per doz.	.75	$1.25	$1.50	$2.00	$3.25
Per 100,	5.00	8 00	10 00	14 50	23 00

GLASS HONEY JARS.

THESE Jars, at the following prices, will be shipped from Cincinnati, O.

1 lb., common glass, per gross	$ 5 50
2 lb., " " " "	7 50
1 lb., flint glass, per gross	8 00
2 lb., " " " "	10 00
Corks for same, per gross	75
Tin Foil Caps for same, per gross	1 00
Labels for same, per gross	75

LONG RUBBER GLOVES.

FOR SIZE, lay the open hand, palm down, on a sheet of paper, and mark the outline of hand and fingers with a pencil. Price, by mail, $1.75.

WOODEN PAILS for HONEY.

WOODEN water pails, well-painted outside, with 3 iron hoops and a tight-fitting wood cover, at $2.25 per dozen. They will hold 25 lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

HONEY KNIVES.

IN using Bingham & Hetherington's Honey Knives only the thin, sharp, beveled edge rests on the combs, and the caps, after being cut off, slide up in large sheets and roll over on the knife, like shavings on a plane. They are 2-in. wide, tempered and finished like a razor, and will last a life-time.

Price, $1. By mail, $1.15.

Muth's Honey Knife, 50c.; by mail 65c.

BEES AND QUEENS.

FULL Colonies of Italian Bees, in Langstroth hives, bred to highest standard of excellence for all the best points, $8.00. Tested Queens, $2.50.

QUEEN CAGES.

OATMAN, Winder, Harris, Hastings, or Scovell—by mail, 15c. Per doz., by express, $1.25; by mail, $1.40.

WIRE NAILS.

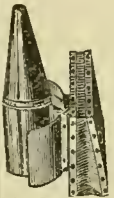
FOR nailing Sections, Cases, Frames Racks, Crates, etc. The entire length of the nail being the same thickness, they do not loosen as ordinary iron nails will, and are not as liable to bend or break.

⅜ inch long,	wire No.	20,	per lb.	30c
½ "	"	19,	"	22c
⅝ "	"	18,	"	19c
¾ "	"	18,	"	17c
⅞ "	"	17,	"	16c
1 "	"	17,	"	16c
1¼ "	"	16,	"	14c
1½ "	"	16,	"	14c
2 "	"	15,	"	12c

If wanted by mail, add 18 cts. per lb. for postage. We can furnish larger nails, up to 5-in. long, when desired.

These prices are now subject to a discount of **50 per cent.**, owing to a decline in the market.

BINGHAM SMOKERS.



THIS is the first and only bellows Smoker ever made which would burn stove-wood. It burns any thing combustible, and needs no care except to be refilled once in one or two hours. It works easily and will throw a stream of smoke ten feet. It will not go out nor wear out. It will save time, stings and money.

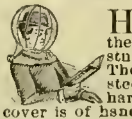
The Doctor	3½ inch,	$2 00
The Conqueror	3 "	1 75
Large, wide shield	2½ "	1 50
Extra Stand, wide shield	2 "	1 25
Plain Standard, nar. sh.	2 "	1 00
Little Wonder, wide sh.	1¾ "	65

Wholesale Rates, on application.

SEEDS for HONEY PLANTS.

White Clover—per bushel (60 ℔s)	$15 00
" " per peck. (15 lbs)	4 00
" " per pound	[illegible]
Melilot Clover—per bushel	$10 00
" " per peck	2 75
" " per pound	20
Alsike Clover—per bushel	$12 00
" " per peck	3 25
" " per pound	25
Bokhara Clover, imported, per lb	50
Mignonette—per oz., 20c.—per lb	2 00
Catnip—per oz., 10c.—per lb.	1 00
Motherwort—per oz., 10c.—per lb	1 00
Spider Plant—per oz, 20c.—per lb	2 00
Cleome—Rocky Mountain Bee-Plant—per oz., 15c.—per lb.	1 25
Figwort—or the Simpson Honey Plant—per oz., 20c.—per lb.	2 00

NEW BEE VEIL.



HAS 5 cross bars *riveted* through the center at the top. These button to studs on the neck-band. The bars are light spring steel; the neck-band is of hard spring *brass*; and the cover is of handsome light material. It is very easily put together—no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. It protects against mosquitoes, flies, bees, gnats, etc. The Veil weighs only 5 oz. Price $1.00.

GUMMED HONEY LABELS.

OF these we have 20 styles, and when ordered in quantities of 250, 500 or 1,000, we print the name and address of the apiarist. Prices range from 25 cents for 250, and upwards. Samples sent upon application.

MISCELLANEOUS.

Little Detective Scales, weigh 25 ℔ $2.50
Honey Gates for Extractors, 75c.
Gearing for Honey Extractors, $1.50.
Handles for Honey Gates, 25c; mail 40c
Novice's Metal Corners, per 100, 50c.
Wire Cloth, painted, 14 mesh, 8c. sq.ft.
" tinned, for Qn. cages, 12c. "
" " for extractors, 15c. "
Glass, 5x6 in., 240 lights in a box, $3.
Glass for shipping crates, per 100 lights
2¾x13½, for one-℔. sections, $2.50.
3⅜x16½, for two-℔. sections, $3.50
Whitman's Fountain Pump, $8.
Wire (for fdn.) oz. spools, 4c.; mail 6c
" " 1 ℔. spools, 40c.; mail 58c
Novice's Iron Blocks, for making his metal-corner frames, 15c; mail 25c
Queen Registering Cards, 10c. per doz.
Scissors, for cutting queen's wing, 50c.
Ribbon Badges, 10c.; 100 for $8.00.
" rosette and gold lace, 50c.
Rubber Sprinkler, $1 00; by mail, $1.10
Parker's Foundation Fastener, 25 cts.; by mail, 40 cents.
Bee Veil (common), by mail, 50 cents.
Metal Rabbets, per foot, 2c.
Registering Slates, 50 for $150;—100 for $2.50. Sample, by mail, 10c.
Felt Blankets, 35c. per lb. by express.

APIARIAN SUPPLIES

MANUFACTURED BY

W. T. FALCONER, - JAMESTOWN N. Y.,

Are unsurpassed for **Quality** and fine **workmanship** A specialty made of all Styles of the **Simplicity Hive**, including the **Van Deusen-Nellis**. The **"FALCON" Chaff Hive** with movable upper story continues to receive the highest recommendations as regards its superior advantages for **WINTERING** and handling bees at all seasons.

DOVETAILED SECTIONS

same price as One-Piece. Also manufacturer of

VANDERVORT FOUNDATION.

Dealer in a full line of **BEE-KEEPERS' SUPPLIES**. Send for my *Illustrated Catalogue* for **1885**. Free. **Prices always reasonable.**

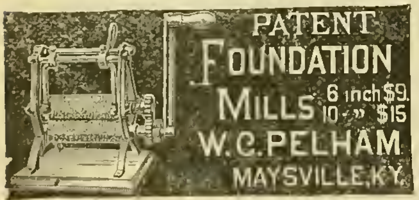
DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

THOS. G NEWMAN & SON, Chicago, Ill.,
C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
F. L. DOUGHERTY, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
ELBERT F. SMITH, Smyrna, N. Y
C. F. DALE, Mortonsville, Ky.
EZRA BAER, Dixon, Lee Co., Ill.
CLARK JOHNSON, Covington, Ky.
C. A. GRAVES, Birmingham, Ohio.
M. J. DICKASON, Hiawatha, Kans.
ED. R. NEWCOMB, Pleasant Valley, N. Y.
J. W. PORTER, Charlottesville, Va.
J. B. MASON & SONS, Mechanic Falls, Maine.
J. A. HUMASON, Vienna, O.

and numbers of other dealers. Write for SAMPLES FREE and Price-List of Supplies, accompanied with **150 COMPLIMENTARY** and **UNSOLICITED TESTIMONIALS** from as many bee-keepers in 1884. **We guarantee every inch of our Foundation equal to sample in every respect.**

CHAS. DADANT & SON,
5AB1y HAMILTON, Hancock Co., ILL.



37AB1y

ON 30 DAYS' TRIAL.

THIS NEW

ELASTIC TRUSS

EGGLESTON'S
SENSIBLE
TRUSS

Has a Pad different from all others, is cup shape, with Self-adjusting Ball in center, adapts itself to all positions of the body while the ball in the cup presses back the intestines just as a person does with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail. Circulars free. EGGLESTON TRUSS CO., Chicago, Ill.

45D6t Mention this paper.

Western BEE-KEEPERS' Supply House.

We manufacture Bee-Keepers' supplies of all kinds, *best quality* at *lowest prices*. Hives, Sections, Comb Foundation, Extractors, Smokers, Crates, Honey Buckets Veils, Feeders, Bee-Literature, etc., etc. Imported Italian Queens, Italian Queens, Bees by the lb., Nucleus or Colony. "Bee-keepers' Guide, Memoranda and Illustrated Catalogue" of 48 pages FREE to Bee-Keepers. Address **JOSEPH NYSEWANDER, DES MOINES, IOWA.**

1C6t

The Western World

GUIDE and HAND-BOOK

OF USEFUL INFORMATION.

For HOME SEEKERS or Tourists, Capitalists or Laborers. A vast amount of information not to be found elsewhere at any price.

A cloth-bound book, 4x7 inches, 288 pages

Price, 50 Cents.

The following is only a part of the Contents:

Colored Maps of all the States and Territories, including Alaska and District of Columbia.

Diagrams showing area, population, products, Government, State, School and Indian Lands of the several States.

Histories of each of the States from the Earliest Times.—Descriptive of their Topography, Soil, Climate, Rivers Mountains, Natural Wonders, Population, Area, Islands. Lakes, Mines, Products, Manufactures, Industries, Cities, School Systems, Collection and Exemption Laws, Date of Holding Elections, Number of Representatives, Senators, Congressmen, and Presidential Electors, Number of Union and Confederate Soldiers in the Field, Price of Land Cleared and in Forest, Extent of Forest, Number of Different Callings, Rate of Interest, Usury Laws, PEDDLER OR DRUMMERS' LICENSE LAWS, DIVORCE LAWS, MINING LAWS, DESCRIPTION OF PUBLIC LANDS, LIST OF LANDS SUBJECT TO THE FORMS OF ENTRY, List of Land-Offices, Opportunities for Homes or Enterprise, Rainfall, Health, Ports of Entry, Population (male, female and foreign) Number of Indians, Mineral Resources, Nicknames of States and for whom or what they are named, Miles of Railroad and Canals, Tidal Frontage, STATE LAND LAWS, Religious Denominations and their Numbers, Number of Counties and Names.

Government Land Laws giving complete law on the subject of PRE-EMPTION HOMESTEAD, TIMBER CULTURE, SOLDIERS' HOMESTEAD, SWAMP LANDS, LAND WARRANTS, SCRIP, INDIAN TRUST LANDS, DESERT LANDS, COAL LANDS, TIMBER LANDS, MINERAL LANDS, AGRICULTURAL COLLEGE LANDS, ETC.

How to Acquire Lands of any kind belonging to the Government by any forms of entry who may acquire them, and the different laws applicable to the different sections.

Postal, Pension and Patent Laws of the United States.

Coats-of-Arms of the States and Views of Celebrated Places, and of life in different regions.

Rules for measuring Lumber, Logs, Grain, Liquids, Tables of Weights and Measures of all kinds, Interest Rules and Tables, Lumber Tables.

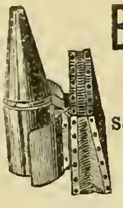
Systems of Land Measures in various parts of the United States,

Contains also a Million useful facts.

The Weekly Bee Journal, for one year, and the Guide, postpaid, for $1.30.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column



Bingham Smokers

AND

HONEY-KNIVES.

Send for Circulars.

Bingham & Hetherington,
ABRONIA, MICH.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

WIN more money than at anything else by taking an agency for the best selling book out. Beginners succeed grandly. None fail. Terms free. HALLETT BOOK CO. Portland, Maine.

51A1

NEW BOOK---JUST OUT.

Success in Bee-Culture.

BY

JAMES HEDDON.

Mail him a postal for his

CIRCULAR for 1886

containing Prospectus and Price of Book; Cuts and Prices of his New Reversible Hive, as well as his modification of the Langstroth Hive and other Implements for Bee-keepers.

Honey for Sale.

He still has on hand a quantity of well-ripened, bright BASSWOOD extracted HONEY, at the following low price, **for CASH with the order:**

100 Pound Kegs (net) each	$8 00
50 " " " "	4 00

☞ Free on board CARS, and no charge for kegs. Shipments prompt.

He also has on hand several thousand pounds of mixed honey, of about equal parts of basswood and fall flowers, which may be called AMBER HONEY, that he will sell as above, at 1 cent less per pound.

Address, **JAMES HEDDON,**
DOWAGIAC, Cass County, MICH.

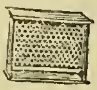
Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address TRUE & Co., Augusta, Maine.

51A1y

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

MAULE'S GARDEN SEEDS

Cannot be Surpassed. New Seed Catalogue for 1886. *Free to all.* Best published. Over 225,000 copies already mailed. **You ought to have it.** Send your address at once on a postal card for a copy to

Wm. Henry Maule, 1738 Filbert Street, Philadelphia, Pa.

1C3t

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ⅓ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Jan. 13, 1886. No. 2.

"Excellence or Cheapness, Which?" may be answered thus :

"Economy always pays;
The man who saves is wise ;
And those content with *must* to-day,
Will surely one day rise."

We have Received a very good photograph of Mr. Heddon, and placed it in the BEE JOURNAL Album, kept on our desk for the examination of visitors.

Mr. Otto Kleinow says that he presented the bouquet of flowers to Mr. A. I. Root, at the Detroit Convention, mentioned on page 794 of the BEE JOURNAL for Dec. 16, 1885.

Mr. S. X. Clark, of Delavan, Wis., who was well-known to our readers as a correspondent, is dead. We have written for particulars, and as soon as they are received they will appear in the JOURNAL.

Prof. A. J. Cook has been appointed by President Cutting, of the North American Bee-Keepers' Society, a committee to confer with the Department of Agriculture at Washington, in reference to National apiculture. President Cutting says :

> I have appointed Prof. A. J. Cook a committee to confer with the Commissioner of Agriculture, with reference to Apiculture and the U. S. Department of Agriculture.—From my personal knowledge of Prof. Cook's fitness for this position, I think he will accomplish much good for this Society.

To Ohio Bee-Keepers.—Dr. H. Besse, ex-President of the Ohio State Bee-Keepers' Association asks us to give the following notice. It came a day too late for our last issue, and it is therefore of but little use now :

> As the time for holding our annual State Bee-Keepers' Convention is nearly at hand, I take the liberty to say that we will have a meeting at Columbus, on the 12th and 13th inst. and all interested in bee-culture are invited. Such will call at the Farmers' Hotel, when they will be instructed as to place of meeting. Important business will be transacted.

The United States Apicultural Station at Aurora, Ills., in charge of Mr. N. W. McLain, is a grand step in the right direction, by the United States Government. In a New-Year's letter to the AMERICAN BEE JOURNAL, Mr. McLain remarks as follows :

> DEAR MR. NEWMAN :—I am diligently at work "plowing the ground," preparatory to the experimental work of the coming year. Oh, what a big field it is ; and yet it is rich and promising. I hope that we may both see our work prosper, and bring forth gratifying success during the year upon which we have entered.
>
> I will have a copy of the Annual Report of the United States Department of Agriculture mailed to each member of the North American Bee-Keepers' Society as soon as issued.
>
> I wish to congratulate you, Mr. Editor, upon the enterprise you have shown in giving such a complete and accurate report of the proceedings of the annual meeting of the North American Bee-Keepers' Society. It is an excellent piece of reportorial work, and should be duly appreciated by your readers. I wish you and the AMERICAN BEE JOURNAL a "Happy and prosperous New Year."

We would thank Mr. McLain for his endeavors to aid the pursuit of bee-keeping by his many very interesting experiments, and we fully endorse what Brother Root says in *Gleanings* concerning it, which is as follows:

> One of the many treats to which we listened at the Detroit Convention was the papers from Prof. McLain, whom we have before mentioned as employed by the Government, to test disputed matters in bee-culture. A very elaborate experiment was made to ascertain whether bees can puncture grapes. Not only were grapes innumerable provided, but many colonies of bees. The decision was in the negative.
>
> We are pleased to mention that he has also succeeded in fertilizing queens by mechanical means. It is true, this has been accomplished before ; but the Professor will probably soon be able to give directions so that any ordinary bee-keeper can manage the process with but little risk of failure. We have reason to feel thankful toward the U. S. Government for having furnished the means for such experiments ; and we also rejoice that we have secured the services of so able a man. He promises to furnish articles for the different bee-periodicals in due season.

"Success in Bee-Culture, as practiced and advised by James Heddon," is the title of a pamphlet on bee-culture just received. It consists of 128 pages ; is well-printed on good paper and illustrated. It covers the whole field of practical apiculture, and is intended for specialists and those who keep bees for the money to be obtained from the business. In his preface the author says :

> In the delineation of methods of management, and of implements and devices, appertaining thereto, it has been my constant aim to present such only as will approximate uniform and unvarying success, as nearly as possible, when the requisite conditions have been complied with, and thereby obviate the disappointments and vexatious losses, resulting from the complicated and impracticable in both management and utensils. In short, the instruction herein given, is from the dollar-and-cent basis — the financial results to accrue therefrom, and not from the vagaries and inconsistencies of empiricisms, aiming to present the new and useful rather than mere repetition of the old.

At this season of the year we are too busy to read a book through and review it (that we shall do hereafter), but after reading several chapters we are sure that its perusal will handsomely *pay* every honey-producer. It can be obtained at this office for 50 cents.

More Misrepresentations About Comb Honey.—The *Advance*, a religious paper of this city, dated Dec. 31, 1885, contains the following misrepresentations about comb honey being manufactured, etc., etc., signed "R. W. :"

> The time was, until recently, that if one got honey in the comb, he was sure about it. But all that is changed. Men have learned not only to manufacture the comb much more rapidly and cheaply than the bees can do it, but now fill it, capping the so-called honey-cells by machinery, and sell it at a lower figure than any at which the real honey can be produced. Some of our readers know unscrupulous men in the country who having bought a few hives of bees, almost immediately began selling great quantities of honey in the comb. They procured it from the manufacturers of the adulterated article, but any one familiar with the taste of the real honey easily detects the fraud. I went to one grocer in this city, who had recently purchased from Ohio, a thousand pounds of what he honestly supposed real honey, and convinced him in five minutes that almost the entire quantity was made up of syrups, deftly secured in the comb. He simply said, "What are we coming to?" We have no State laws sufficiently guarded in their provisions to reach these rascals, and punish them as they deserve.

The author of the article is the Rev. Robert West, who has been deceived by that "scientific pleasantry" (lie) of Prof. Wiley, and has unwittingly reiterated the falsehood —giving it a fresh impetus, greatly to the injury of the industry of bee-keeping. As "Manager of the National Bee-Keepers' Union," we have requested the author to publish a full retraction and apology in the *Advance*, or take the consequences of a lawsuit. That is the only way to counteract such misrepresentations and falsehoods.

New Price-Lists have been received from the following persons :

A. I. Root, Medina, O.—40 pages—Bee-Keepers' Supplies of all Kinds.

Paul L. Viallon, Bayou Goula, La.—16 pages—Implements for the Apiary.

I. R. Good, Nappanee, Ind.—1 page—Italian Bees and Queens.

C. W. Costellow, Waterboro, Maine—16 pages—Apiarian Supplies.

James Heddon, Dowagiac, Mich.—30 pages —Prospectus of his New Book, "Success in Bee-Culture"—price 50 cents.

D. Landreth & Sons, Philadelphia, Pa.—98 pages—Seed Catalogue.

E. R. Badger, Rochester, N. Y.—16 pages—Incubator and Brooder.

Any one desiring a copy of either of them, can do so by sending a postal card to the address as given above.

The Cincinnati Illustrated Graphic, of Jan. 16, will contain a double page illustration of the Cherokee Nation, again brought so prominently before the public by the leasing of six million acres of their land. Pictures will be given of Chief Bushyhead and other prominent Cherokees, and of their principal buildings. Accompanying this pictorial effort will be a full and interesting history of the Nation, by the well-known author, John R. Musick.

If You Want a handsome Calendar for 1886, get Hood's Household Calendar. You may search for days, but you will not get one more artistic, more beautiful, or more convenient than that issued by the proprietors of Hood's Sarsaparilla. Ask for it at your druggist's, and if you cannot get it there, send 6 cents for one copy, or 10 cents for two, to C. I. Hood & Co., Lowell, Mass.

Early American Apicultural History.

FROM 1860 TO 1871.

The Early History of Bee-Keepers' Societies in America is very interesting, and we feel sure that the following condensed history, covering a period from 1860 to 1871, will be devoured by thousands of our readers with considerable relish. It is condensed from hundreds of pages in the early volumes of the American Bee Journal, and many other sources:

First Bee-Convention.

The first Convention of the bee-keepers of America was held at Cleveland, O., on March 15, 1860. The following persons were then elected as officers:

President—Prof. J. P. Kirtland.
Vice-President—Wm. M. Cunningham.
Corresponding Sec'y—E. T. Sturtevant.
Recording Sec'y—J. Kirkpatrick.
Treasurer—E. Gallup.

The first question discussed was: "What is the best mode of wintering bees?" The Rev. L. L. Langstroth was present, and advocated cellar-wintering. Others favored burying them in clamps. The subjects afterwards engaging their attention were ventilation of hives, feeding bees, robbing, feeding rye flour for pollen, Italian bees, swarming, bee-houses, etc.

When this Convention was held there were no periodicals devoted to the pursuit of bee-culture in America, and the report of the Convention was published in the "Ohio Farmer." Mr. Samuel Wagner started the Monthly American Bee Journal in the following January (1861), and in the March number of the Bee Journal he re-published the proceedings under the heading of the "First American Bee-Keepers' Convention," and editorially remarked as follows:

> "We take pleasure in placing on record in our columns, the proceedings of the first American Bee-Keepers' Convention, which met at Cleveland, O., on the 15th of March, 1860. The time is approaching when bee-culture will occupy a higher position than it has yet held in this country, and when it will be interesting to trace back its history to those pioneer movements which conduced to revival and progress."

The Second Convention

was held in Cleveland, O., on March 14, 1861, President Kirtland in the chair. The discussions were mostly on the adoption of the movable-frame hives, and a resolution was passed welcoming the advent of the American Bee Journal, and recommending it to all bee-keepers. This meeting was adjourned to Nov. 21, 1861, when a semi-annual meeting was inaugurated.

The Third Convention

was called to order by President Kirtland on Nov. 21, 1861, and the members discussed many important matters, among them wintering, feeding, and handling bees.

On account of the Civil War, attention was called from the pursuit of bee-keeping, the American Bee Journal was suspended for 4½ years, and we know of no Convention of bee-keepers of any importance until 1866.

Other Conventions Organized.

The Wisconsin Bee-Keepers' Association was formed in Madison in 1866.

On Oct. 4, 1867, the "Northwestern" was organized, in Des Moines, Iowa, on the State Fair Grounds, about 150 bee-keepers being present; no business of any importance seemed to have been done. R. R. Murphy was elected President, and M. M. Baldridge, Secretary.

The Kentucky Bee-Keepers' Association was formed at a Convention held in Lexington on Nov. 20, 1867. Dr. John Dillard was elected Pres., and W. Spencer, Sec.

The Michigan Bee-Keepers' Association was formed on April 7, 1869. Mr. E. Rood was elected its first President, and Prof. A. J. Cook its first Secretary. The first Convention lasted two days, and the discussions extended over nearly the entire field of the apicultural pursuit. Its second Convention was held on Sept. 21, 1869, and Mr. A. F. Moon was elected President. Both meetings were held at Jackson, Mich.

The Ohio bee-keepers met in Convention at Toledo, O., on Sept. 15, 1869, and adjourned to Cleveland at the call of the Secretary, Mr. J. F. Martin. The Cleveland Convention was held on Jan. 14, 1870, when it was decided to hold annual sessions thereafter. This was the continuation of the first American Bee-Keepers' Society (formed in 1860), and the President, Dr. Kirtland, and Secretary, E. T. Sturtevant, were re-elected.

The Chautauqua Co. (N. Y.) Bee-Keepers' Association was organized on Jan. 29, 1870, by adopting a constitution and by-laws and electing T. S. Moss President, and C. E. Benton, Secretary and Treasurer. It was decided to hold the first annual Convention at Mayville, on Sept. 20, 1870.

The Northeastern (New York) Bee-Keepers' Association was instituted in March, 1870; but we can find no minutes of that meeting. A semi-annual session was held at Utica, N. Y., on Sept. 27 and 28, 1870. At this meeting it was agreed to institute a National Convention, and a call was issued for such to be held at Cincinnati, O., in February, 1871.

The Michigan Bee-Keepers' Association met at Lansing on March 23, 1870. President A. F. Moon strongly urged the formation of a National Bee-Keepers' Society, and several letters were read from prominent apiarists, urging the formation of such a Society. After considerable discussion the following was unanimously adopted:

> "Whereas, The subject of a National Bee-Keepers' Association was much talked of at our last gathering; and
>
> "Whereas, In our judgment, the time for the same is fully come; therefore
>
> "Resolved, That we issue a call for a National Bee-Keepers' Association to be held in the city of Indianapolis, Ind., on the 10th and 11th of August next."

The date was afterwards changed to Dec. 21, 1870, as will be seen by the following, which is copied from the American Bee Journal of February, 1871:

North American Bee-Association.

On Feb. 10, 1870, Prof. A. J. Cook, Secretary of the Michigan Bee-Keepers' Association, issued a circular, which he mailed to the members of that Association, to the prominent bee-keepers of other States, and to the press, inviting everybody interested to meet at Lansing, Mich., on the 21st of March, for the purpose of discussing special questions on the subject of bee-culture, prominent among which would be the holding of a National Bee-Keepers Convention, at some central point during the year. On the day announced, the Convention was held at Lansing, and the question of holding a National Convention was discussed with the wildest enthusiasm. As was anticipated, the discussion resulted in a call to the bee-keepers of America for a National Convention, to be held in Indianapolis, Ind. The location was happily chosen, and has given very general satisfaction, it being centrally located, and readily accessible by a complete net-work of railroads.

Accordingly, on Dec. 21 (the day finally fixed upon), a large number of the most prominent and enterprising of bee-keepers of the United States and Canada, met in convention at the House of Representatives, in Indianapolis, and held six sessions, the last one ending at midnight on the 22d of Dec., 1870. Every seat in the house was occupied; the States represented being Indiana, Illinois, Michigan, Ohio, Wisconsin, Kentucky, Iowa, New York, Tennessee, Missouri, and Pennsylvania. Delegates were also present from Utah and Canada. On the whole, it is safe to assume that never in the history of America has bee-culture been represented in a Convention by so large an assemblage of wide-awake, intelligent, and enterprising bee-keepers.

The Convention was called to order at 10 a.m., by A. F. Moon, President of the Michigan Bee-Keepers' Association, who was elected temporary President, and M. M. Baldridge, of Illinois, temporary Sec.

On motion of Dr. Bohrer, of Indiana, a committee of one member from each State represented, was appointed to prepare a Constitution and to nominate officers, viz: Z. S. Richardson, of Indiana; Ezra Rood, of Michigan; D. L. Adair, of Kentucky; M. L. Dunlap, of Illinois; Aaron Benedict, of Ohio; Adam Grimm, of Wisconsin; Elisha Gallup, of Iowa; Dr. T. B. Hamlin, of Tennessee; Robert Bickford, of New York; W. D. Roberts, of Utah Territory; Daniel McIlvain, of Pennsylvania; J. L. Smith, of Missouri, and Wm. F. Clarke, of Canada.

This committee reported a Constitution which with a few amendments was adopted; and recommended the following as officers during that meeting:

President—A. F. Moon.
Vice-Presidents—Elisha Gallup and Dr. G. Bohrer.
Secretary—M. M. Baldridge.
Assistant Sec'y—Wm. F. Clarke.
Treasurer—N. C. Mitchell.

The report was adopted, and President Moon thanked the Convention for the honor conferred upon him, and expressed the desire that it might be the means of promoting the best interests of the Association, and bee-culture generally.

The exhibits at this Convention were: 18 movable-comb hives; 3 cages for fertilizing queens in confinement; 3 queen nurseries; 2 bee-feeders; 1 trap for catching queens and drones when leaving the hives; 1 wax-extractor; and 4 machines for extracting honey from the combs.

The election of officers for the ensuing year was then announced as in order.

On motion of R. C. Otis, of Wisconsin, the Rev. Mr. Langstroth was made an honorary member of the Association.

In view of what Mr. Langstroth has already done in promoting the interests of bee-keeping, not only in this but in other countries by the introduction of an improved system of bee-management, Mr. Otis moved that Rev. L. L. Langstroth, of Oxford, O., be crowned with the honor of being the President of the North American Bee-Keepers' Association for the ensuing year.

The motion was warmly seconded, and there being no other nomination, Mr. M. L. Dunlap moved that President Moon be authorized to cast the unanimous vote of the Association.

The motion prevailed, and the tellers announced the result of the ballot. On motion the Secretary was instructed to notify Mr. Langstroth of his election.

On motion of Mr. W. F. Clarke, the Constitution was amended so as to provide for three additional Vice-Presidents, making the number five instead of two.

The following officers were unanimously elected:

Vice-Presidents—Wm. F. Clarke, Ont.; Dr. T. B. Hamlin, Tenn.; Robert Bickford, N. Y.; Elisha Gallup, Iowa; A. F. Moon, Mich.

Secretary—M. M. Baldridge, St. Charles, Ills.

Treasurer—N. C. Mitchell, Indianapolis, Ind.

The following resolution was adopted: —RESOLVED, That the Executive Committee be instructed to publish the proceedings of this Association in pamphlet form at the earliest practicable day, provided the funds will warrant, and that the Secretary forward a copy to each member as soon as published.

The following were admitted as honorary members:

Samuel Wagner, editor of the AMERICAN BEE JOURNAL, Washington, D. C.; M. Quinby, author of "Mysteries of Bee-Keeping," St. Johnsville, New York; E. S. Tupper, Brighton, Iowa: Rev. John Dzierzon, Karlsmarket, Lower Silesia, Germany: A. Schmidt, editor of the "Bienen-Zeitung," Eichstadt, Germany; L. Gerster, inventor of the Wax-Extractor, Berne, Switzerland; T. W. Woodbury, Mount Radford, Exeter, England; Major Von Hruschka, Germany, inventor of Mel-Extractor.

As the Rev. L. L. Langstroth was not present, he was notified of his election as President, and accepted it, adding that he hoped "that the interests of practical and scientific bee-keeping may be greatly advanced" by the organization.

The topics discussed were: Management of an apiary; diseases of bees; Italian and Egyptian bees; swarming and increase by division; queen-rearing; bee-pasturage; transferring bees; marketing honey; comb foundation, etc.

The Convention adjourned to meet in Cleveland, O., on Wednesday, Dec. 6, 1871, at 9 a.m.

American Bee-Keepers' Association.

The Cincinnati "Gazette" remarks as follows:

"Various States of the Union, either singly or two or three of them united, have formed bee-keepers' associations, but hitherto no national association has existed in this country. The impetus given to bee-culture by the discoveries of Huber, the distinguished Geneva apiarist, at the close of the last century, has sent hundreds into that pursuit. The progress of skill and knowledge in it has not lagged behind the advance made by science and skill in other departments of knowledge and industry since the blind Huber died. The necessity of associated action and effort for the benefit of bee-culture has been widely felt and that feeling has been manifested in forming numerous local associations.

"About a year ago, two of these associations, at nearly the same time, conceived the idea of issuing a call for a convention to form a national organization. One of them was the Michigan, the other the Northeastern Bee-Keepers' Association. The North American Bee-Keepers' Association, organized at Indianapolis last December, and the American Bee-Keepers' Association, organized here, are the results of calls issued by the above local bodies respectively, viz: the Michigan and the Northeastern. Between these associations there has been some controversy—with but little, if any, ill feeling—as to the claim of priority in issuing the call for the National Convention.

"The Convention called by the Michigan Association met in December last; that called by the Northeastern Association is the one in session now in this city. Both associations have the same man, the Rev. L. L. Langstroth, of Oxford, O., for President. Many members of the Association formed yesterday are members of the North American formed at Indianapolis. Mr. Langstroth, of the former body, in retiring from the active duties of the chair last evening, called to officiate as Chairman of the American, the Rev. Mr. Van Slyke, of the Northeastern Association. The union of the two National Associations at their next meeting, which, for both, is at the same time and place, is a moral certainty."

About 150 delegates from various States assembled in Convention at 1 p.m., and an organization was effected by electing Rev. Wm. F. Clarke, of Toronto, Chairman.

Gen. D. L. Adair, of Kentucky, moved to adopt a Constitution, which he presented, and make this Convention an Association, to be known as the American Bee-Keepers' Association.

This was objected to as needless, since we have already a North American Bee-Keepers' Association. Mr. H. A. King, of New York, favored Gen. Adair's motion. This would be the first step toward uniting the North American Association and the one proposed to organize here.

Dr, Bohrer, of Indiana, a delegate to the Convention that met at Indianapolis, Dec. 21, 1870, spoke in favor of maintaining good feeling. He desired that there should be but one Association, i. e., the North American or the American, as should be agreed.

Mr. R. C. Otis, of Wisconsin, moved, as an amendment to Gen. Adair's motion, to appoint a committee to negotiate for union with a like committee of the North American Bee-Keepers' Association.

Mr. H. A. King, of New York, moved to amend the amendment, that the Convention should first organize by adopting a Constitution, and then propose a union.

By carrying the previous question, the debate was cut off.

Mr. King's amendment to Mr. Otis' amendment was adopted.

The "American" Society organized by adopting a Constitution similar to the "North American," adopted at Indianapolis, and elected the Rev. L. L. Langstroth President, Rev. H. A. King, Secretary, Gen. D. L. Adair, and L. C. Waite Assistant Secretaries, N. C. Mitchell, Treasurer, and 15 Vice-Presidents.

The Rev. L. L. Langstroth took the chair, but being feeble, he called the Rev. E. Van Slyke, Vice-President for New York, to preside.

Rev. W. F. Clarke, the retiring temporary President, offered the following resolution, which was unanimously adopted:

"RESOLVED, That this Association, when it adjourns, adjourn to meet at Cleveland, O., at 9 a.m., on the first Wednesday in December, 1871, at the same time and place as the North American Bee-Keepers' Association; when, provided the other organization shall instruct its officers to do the same, the officers of this body shall resign, with a view of there and then consolidating both associations into one."

On motion of Mr. Peck, amended by Mr. Clarke, Mr. King, Mr. Peck and Mr. Otis were appointed a committee to confer with a similar committee appointed by the North American Bee-Keepers' Association, with a view to a union of that with this organization, and report the same to this Association.

The topics discussed were: Winter management of bees; artificial swarming; prevention of natural swarming; Italian bees vs. hybrids and black bees; hindrances to bee-culture; drones; honey-plants; introducing queens; extracted honey, etc.

Mr. E. Gallup read an essay entitled, "Successful bee-keeping in a nut-shell."

The following were made honorary members: T. W. Woodbury, Mount Radford, England; F. W. Vogel, Lekmanshofel, Prussia; Rev. George Kleine, Luethorst, Prussia: Andreas Schmidt, Eichstadt, Bavaria; Rev. John Dzierzon, Carlsmarkt, Silesia; Baron A. and Baroness L. Von Berlepsch, Munich, Bavaria; Prof. C. T. E. Von Siebold, Munich, Bavaria; Maj. F. Von Hruschka, Dolo, Italy; Dr. A. Dubini, Milan, Italy; Viscount De Saliceto, Milan Italy; A. S. Packard, Salem, Mass.; C. V. Reily, St. Louis, Mo.

Statistics: 120 bee-keepers reported that they owned 5,051 colonies of bees; and the honey produced amounted to 83,065 pounds, and the average price it sold at, was about 30 cents per pound. Beeswax, 1,046 pounds—4,612 colonies were in movable frame hives, and 439 in box-hives.

The Rev. L. L. Langstroth was the recipient of an expression of the gratitude of bee-keepers (in the shape of a well-filled purse), and, by unanimous vote, he was accorded the special privilege of speaking when, and as long as he chose to do so, on any subject. He solved many knotty questions, and often "poured oil on the troubled waters."

This Association adjourned to meet with the North American at Cleveland, O., on Wednesday, Dec. 6, 1871, at 9 a.m.

The Two Associations Consolidated.

Pursuant to adjournment of both, the "American" and "North American" Bee-Keepers' Associations met in joint session at Temperance Hall in Cleveland, O., at 10 a.m., on Dec. 6, 1871. The President of both societies, the Rev. L. L. Langstroth, being absent on account of illness, Vice-President W. F. Clarke called the meeting to order, and, by unanimous vote, both associations were dissolved for the purpose of consolidation.

Moses Quinby was elected temporary chairman, and Rev. H. A. King temporary secretary.

By vote, all the officers of the dissolved associations present, were created a committee to present a constitution for permanent organization. This committee were: Rev. W. F. Clarke, Dr. G. Bohrer, A. F. Moon, Dr. T. B. Hamlin, S. Hoagland, Aaron Benedict, L. C. Waite, Gen. D. L. Adair, and N. C. Mitchell. The committee reported a Constitution, which was then unanimously adopted.

The following were elected a committee on honorary members: Messrs. Root, Moon and Bohrer. Their report was adopted. It read thus:

"Such persons as were made honorary members of both the North American Bee-Keepers' Association, held at Indianapolis, and the American Bee-Keepers' Association, at Cincinnati, be and they are hereby declared honorary members of this Society."

The Society then proceeded to the election of officers for the ensuing year, which resulted as follows:

President—M. Quinby, St. Johnsville, N.Y.

Vice-Presidents—Aaron Benedict, O.; J. E. Hetherington, N. Y.; E. J. Peck, N. J.; Seth Hoagland, Pa.; D. L. Adair, Ky.; T. B. Hamlin, Tenn.; G. Bohrer, Ind.; Ezra Rood, Mich.; M. M. Baldridge, Ills.; R. C. Otis, Wis.; J. W. Hosmer, Minn.; E. S. Tupper, Iowa; S. A. Stillman, Mo.; L. J. Dallas, Kans.; W. D. Roberts, Utah; W. F. Clarke, Ont.; Hugh Cameron, D. C.

Secretary—H. A. King, N.Y. Recording Secretary—A. J. Cook, Mich.: Corresponding Secretary, A. I. Root, O.; Treasurer, N. C. Mitchell, Ind.

The following business committee was appointed to serve during the session: Messrs. Clarke, Waite, Adair, Hoagland, Hosmer, Moon, and Mrs. Tupper.

Dr. Bohrer, of Indiana, offered the following resolution, which was adopted:

Resolved, That the proceedings of the North American Bee-Keepers' Association held at Indianapolis, and the American Bee-Keepers' Association held at Cincinnati, also of this session of the North American Bee-Keepers' Society, be published in pamphlet form, and a copy sent to each member of this Society free of charge, the expenses to be paid out of the funds in the treasury.

Mr. Rood, of Michigan, offered the following, which was adopted:

Resolved, That a committee on publication, consisting of Messrs. Adair, Mitchell and King, be appointed, and that they be empowered to employ assistants in reporting.

It was resolved, that when this Society adjourns it will adjourn to meet at the city of Indianapolis, Ind., on the first Wednesday in December, 1872, at 10 a.m.

The meeting was pleasant and instructive, and great harmony prevailed. Among others, the following resolutions were passed unanimously:

Whereas, Millions of wealth have been annually lost to the people through ignorance of bee-culture; and

Whereas, It is the desire and object of this Society to enhance improvement and prosperity in this regard; therefore,

Resolved, That we earnestly recommend the appointment of an apiarian professor in each of the Agricultural Colleges on the Continent, and that we respectfully call the attention of State and other executives to this subject.

Resolved, That the Secretary be instructed to forward copies of these resolutions to the Governors of all the States, Territories & Provinces in North America.

Resolved, That the thanks of this Society be tendered to our worthy President, Mr. M. Quinby, for the satisfactory manner in which he has presided over our meeting.

The topics discussed were: Why do bees swarm? why do bees rear queens? artificial swarming; can swarming be prevented? best method of handling bees to prevent anger; bee-pasturage; bee-keeping experience; transferring bees; honey-dew; extracted honey; comb honey: marketing honey; controlling the fertilization of queens; mortality among bees; wintering bees; feeding bees with rye meal, etc.

Addresses were given as follows: Gathering the nectar, and how to market it, by President Quinby; popular bee-keeping, by Rev. H. A. King; prize poem, by Rev. W. F. Clarke; the experiences of a beginner, by Mrs. Savery; bee-keeping for ministers, by Rev. W. F. Clarke; reconstructed comb, by Gen. Adair; honey from the linden, by Le Roy Whitford.

Adjourned to meet at Indianapolis, Ind., on Dec. 4, 1872.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Moving Bees.

Query, No. 180.—When is the best time to move an apiary of 75 or more colonies from Wisconsin to the western part of Iowa?—N. S.

I should prefer the month of May.—G. M. Doolittle.

In April or May would be an excellent time.—A. J. Cook.

In early spring, say a week or two before apple bloom.—Dadant & Son.

Under ordinary circumstances perhaps the spring.—C. C. Miller.

I would say move them as soon as they have a general spring flight.—G. W. Demaree.

Early in the spring, and before there is much brood in the combs.—G. L. Tinker.

In the spring, before the colonies become populous, the combs full of honey, and the weather hot—say in May.—W. Z. Hutchinson.

In the late spring just after breeding has become well started, and before the combs become heavily loaded with honey. The reasons will be obvious to any one, even of small experience.—J. E. Pond, Jr.

"Much depends"—cool (not cold) weather, light hives, little brood, that the bees have had a thoroughly cleansing flight before starting, and may have the same soon after landing, are all favorable conditions in connection with the "time to move."—James Heddon.

Sections without Separators.

Query, No. 181.—What is the best width for a one-piece section to be used without separators, so the bees will not build combs between the starters? and will such sections hold one pound when filled?—E. T.

I prefer to use separators.—G. M. Doolittle.

One and three-fourths to 2 inches; the latter will weigh about 1 pound.—Dadant & Son.

One and 5-12 inches, or 7 to the foot, is perhaps the best. The weight will vary slightly.—A. J. Cook.

I think that I should prefer sections 1½ inches wide. They will hold one pound if large enough, but not if they are 4¼x4¼.—C. C. Miller.

After using sections of different widths for 3 years, I have about settled down to sections that are 4¼x4¼x7 to the foot, either with or without separators. When well filled these will hold one pound, when no separators are used.—W. Z. Hutchinson.

The best width for sections without separators is 1⅜ to 1½ inches. I have had many sections of these widths, nearly 6 inches square, built very true and regular without them. A section 4x5 inches will hold very nearly a pound.—G. L. Tinker.

After trying sections of different widths I prefer a section 1¾ inches wide with a scant ⅜-inch opening, fitted closely in a case without separators. In a good season this size section will very nearly average a pound. There is really no such a thing as a "pound section"—there is always some variation in their exact weight.—G. W. Demaree.

About 1⅝ inches; they will not contain a full pound, as a rule. Sections 1¾ inches in width will average one pound when filled, and work well when used without separators. I should not think of using wider sections unless I used separators, and I prefer sections 1⅞ inches wide in my locality.—J. E. Pond, Jr.

Careful and extensive experience has caused me to decide in favor of a section whose width is scant 1¾ inches, or "7 to the foot." I use them of that width, and 4¼x4¼ inches square, both with and without separators; in either case they average as nearly one pound gross as any size I can get.—James Heddon.

Introduction of Virgin Queens.

Query, No. 182.—Is the introduction of virgin queens generally practical?—C.

Not with me.—G. M. Doolittle.

I think that it depends somewhat upon circumstances and the man.—C. C. Miller.

Not unless they are just from the cell.—A. J. Cook.

With me it is; but it depends upon how, where and when they are introduced.—H. D. Cutting.

I think that it would be fair to say both "yes" and "no." It is with "some folks."—W. Z. Hutchinson.

Not generally, but under many circumstances it is. It often requires much care to avoid loss, even with laying-queens.—G. L. Tinker.

I believe that it has been a common practice to introduce virgin queens when "just hatched," for many years. But the successful introduction of virgin queens of several days old is a more modern practice, and is not "generally practical," for the want of "general" knowledge as to the *modus operandi*.—G. W. Demaree.

Yes, it is with me. We must introduce to nuclei either these or cells, and I am most successful with the virgin queens, for I lose not more than one in ten.—James Heddon.

I should say not. As yet, however, the matter has not been sufficiently tested to allow of positive assertions. I have no trouble in introducing them, but I cannot see any gain made by so doing. I am positive that it will never pay a purchaser to buy them at any price, no matter how low.—J. E. Pond, Jr.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ○+ east; +○ west; and this ♂ northeast; ↖○ northwest; ○↘ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

Standard of Excellence for Honey.

REV. O. CLUTE.

Absence from the State prevented me from attending the regular meeting of the Iowa State Bee-Keepers' Association at Des Moines, in September last. In my absence I was made a member of a committee to prepare a standard of excellence to guide judges in awarding premiums on bees and honey at Fairs.

I have not seen that any such standards have been prepared and adopted in other States, and it seems to me a difficult task to prepare such standards in such a way as to make them really valuable and acceptable. In the case of honey I suppose that the points on which a decision should turn are, first, flavor, second, color, and third, condition in which it is put up. Now as to flavor: It is an old proverb that "there is no disputing about tastes." Tastes differ as much as complexions do. Some people like white clover honey best, some basswood, some heart's-ease, some other brands. I have sent samples of white clover and of heart's-ease honey at the same time to the same commission dealer, not naming the honey myself, but simply saying that I could furnish either quality, and orders have come back for the heart's-ease in preference to the white clover, showing that at least some experts prefer the heart's-ease. I think it will be a little difficult to decide which flavor is "the best"—which shall be "the standard."

Then as to color, probably many will say that the crystal clearness and light color of the best white clover and basswood is to be desired. Well, such honey is certainly very beautiful. But why is light color necessarily any better than a tint? Light butter is not looked upon with favor. In butter, a rich yellow color is looked upon as so desirable that even the most reputable dairymen resort to artificial coloring to produce it, and by aid of this coloring they are able to make June butter in January. I have seen goldenrod honey whose rich, yellow, amber color was a great deal more beautiful in my eye than the best basswood honey I ever saw. Probably a good many others would be of the same opinion. There will, hence, be some difficulty in fixing on a particular shade as being the standard by which all honey is to be judged.

Probably the only satisfactory solution of this difficulty will be found in classing honey as "white clover," "basswood," "buckwheat," "heart's-ease," "goldenrod," etc., endeavoring to make as many classes as there are distinct kinds of honey; then offer premiums on each class of honey, and endeavor to establish a standard color and a standard flavor for each class. But even this will not be an easy task.

It would be a good plan for some of our eminent bee-keepers to give in the BEE JOURNAL a statement of their views on this subject. I may have time soon to say a word on a standard of excellence in bees.

Iowa City,○+ Iowa.

For the American Bee Journal.

Bee-Keeping in Cuba.

A. W. OSBURN.

I received a letter from a reader of the AMERICAN BEE JOURNAL, in which he asked: "How do you manage your bees in Cuba, to obtain such large results of extracted honey per colony?" Now, so much depends upon the circumstances that surround us at the time, that nothing more than a general idea can be conveyed in a short article.

As the reader is probably aware, our main honey-flow comes in December and January, and to get bees in condition to store honey in the winter, requires different treatment from what is necessary in the summer months. We expect our flow from the bell-flower to begin the last of November or the first of December, so we must begin preparations for this month in advance—and here comes the rub; our dry season (or honey-dearth) has only just closed when the harvest of bell-flower is at hand. This may seem strange to some, but the bell-flower, being one of the morning-glory family, is a trailing vine and a deep-rooted plant, and is not materially damaged by the short drouth; but the bees have not bred up strong during dry weather, and to make matters still worse, the nights through November are usually cool, that having a tendency to make the queens desert the brood-chambers and go above. So we have a double trouble, *i. e.*, bees not very strong, and breeding in the top boxes.

During the last of November the colonies are all examined, what surplus honey they have is extracted, of those that are full of brood below and are breeding above, the brood in the top box is looked over and a sealed sheet placed on the outside next to either side-wall of the top box, and the centre is filled with freshly-extracted store-combs. The brood that is placed at the outside will hatch, and as soon as it does the bees will fill the combs with honey. The queen will not go to the outside of the hive to lay in these combs, and the center ones being well drawn out store-combs, she is as completely shut off from laying above as though she was really confined below.

We have now accomplished two very important steps towards success, viz., first, breeding in the upper story is prevented, and second, by placing the brood to hatch on the outside, the bees will store there just as readily as in the centre, which you know they will not leave empty while the outside ones are being filled.

In every large apiary there will be a few colonies that do not prosper as well as their neighbors; all these on the first of November are confined to the brood-chamber and their top combs given to those that can use them. Now that we have the weak colonies on as few combs as they can manage, we make the best use of them we can; all we can do with them during November and December is to take what honey they store. It is now of no use to try to make them build up to strong colonies, for they will not do it until February, when they will breed all they need to; but during December and January we keep the brood together, and do not spread it, for the space would only be filled with honey, and the force of nurse-bees divided to the detriment of all concerned. By extracting the honey every week, and giving them no more combs than they can manage, very good results can be realized from a colony that is not strong enough to occupy 2 sets of combs. From our strong colonies we extract the honey every 5 or 6 days, thus keeping the combs empty, and by this constant changing, we get not only pretty nearly double the amount of honey, but the queen is left no chance to breed in them.

In conclusion I have only to say that after having spent many years in apiculture as a specialty, I have learned that the apiarist must become acquainted with his location, and know what to do, and when and how to do it. Many times he must use his own judgment about what kind of treatment the bees require, then go about it and give them that, and do not wait. Bee-men, like poets, "are born, not made." No rule or course of action can be laid down that can be followed out in detail in all localities.

Cuba, W. I.

For the American Bee Journal.

Bee-Keeping in Northeastern Mo., etc.

OTIS N. BALDWIN.

This is not a very good location for bee-culture, as regards honey production, and therefore I would not advise any fortune-hunters to come here to start an apiary. During the year 1883 bees did well here, as was universally the case. This was what I call a bad streak of good luck, or *vice versa*; for it gave everybody the bee-fever—the old men, the boys, the cripples, the old maids, and even the hired girls in this section entered upon the uncertain sea of apiculture. No doubt many dreamed of the untold fortunes they were soon to receive from the labors of the bees, but in 1884-85 the honey crop here was very light, bees have barely stored enough (generally speaking) to live on, and many have even starved; besides, the winter of 1884-85 was ruinous, fully one-half of all colonies here having perished, and what did survive came out in the spring so weak that it took all the white clover season to build them up.

I have been a constant reader of the AMERICAN BEE JOURNAL, and I have read the discussions with great interest, especially as regards size of hive. I think that the size of hive depends very much upon the locality. For instance, in a great honey-yielding district I think that a 10-frame hive would be the proper thing, for in this case, where honey is constantly coming in, the swarms are necessarily larger, as the queen is kept constantly laying, and with 7-frames they would do nothing but swarm, which, to my notion, would be the ruination of a honey crop; but in a place like this, where bees only gather honey from June 10 to June 25, and from August 10 to August 25, ordinarily, we have no use for hives larger than 8-frames; and I believe that 7 are better.

I am rather inclined to Mr. Heddon's views, all things considered, and I believe that the same amount of money invested in small hives will be more remunerative, taking one season with another in districts like this; but if you are in a great honey-producing section, and want to average 400 lbs. per colony, I agree with Mr. Dadant in using a 12-frame hive.

Yesterday I took my bees out of the cellar for a flight, having been confined 60 days, and on examination I did not find more than a handful of dead bees in 28 hives; to-day they had a good flight, and now I will put them back.

Clarksville, ♂ Mo., Jan. 1, 1886.

For the American Bee Journal.

The Insect-Wax of China.

C. THEILMANN.

The following is taken from the *Acker und Garten-Bau Zeitung*, of Milwaukee, Wis., that paper having taken it from the Hong Kong *Daily Press*. It will probably be read with much interest by many readers of the AMERICAN BEE JOURNAL. The article is as follows:

"It is quite a new fact that the Chinese insect-wax is being exported; no wonder that it is generally little known. This wax is mainly composed of wax-acid combined with Oxide of Cerotyl, and is used in England in the manufacture of the best tapers which are at present too costly for general use. There are nearly 500 tons of beeswax imported into England yearly, and as Chinese insect-wax can in the highest degree be appropriated the same as beeswax, it will bespeak a great future.

"Within the past few years the Chinese insect-wax has drawn the attention of the French Government, which has made trials in Algeria to climatize the insects and their mother-tree there; also the director of the Kew Gardens, Sir Joseph Dalton Hooker, has had his attention drawn to their produce, and has applied to Sir Harry Parks for better information about the insect and its white wax, and to learn more about the insect and wax-trees, and last, about the wax product. Sir Harry Parks gave the commission to Mr. Hosie, to visit the wax-producing territory of the Chinese Province, Szetschnen.

"Mr. Hosie thereafter traveled and searched in June and July, 1884, the interior of Szetschnen, studied the case at that place, and made a report thereof to the English Government, which report was published in the second Chinese Bluebook of 1885. This report is positive, and explains fully, though the writer has classified it in a way that is rather hard to understand, having classified it in four rubrics, viz.: 1. The insect-tree. 2. The insect. 3. The wax-tree. 4. The wax. It looks as if some parts of the Province of Szetschnen were extraordinarily favored for the industry; likewise the Chien-chang-valley, the Chin-wie-territory, and the neighborhood of Chung-ching where the tree in which there is suspected Ligustrum Luzidum, is growing wild.

"Mr. Hosie failed to give the correct situation of these places, but we find in Playfairs' (Cities and Towns of China), that all the vicinities where the tree grows in profusion, and where the above industry is in its full bloom, lies between the 29th and 30th degrees north latitude, and 103 to 104 east longitude. In the aforesaid districts there is great activity in scraping the pea-like outgrowths or galls, off the limbs of the insect-trees, to export them to the different places—Szetschnen and other provinces, especially to Hunan and Kweichow. Each of these galls contains a little colony of very small, brown insects, which look like small lice, and each of them has six legs and a pair of antennæ which are of wedge form; sometimes they have also a small white cocoon which contains a bug, called 'buffalo-beetle,' which also has six legs and a long trunk that is armed with a pair of pincers.

"These galls are yearly (during the latter part of April) taken from the limbs of the insect-trees, and 20 to 30 pieces rolled in the leaves of the wood-oil tree and tied with rice-straw, or they are put in paper packages which weigh about 12 Chinese ounces, and are valued from ½ to 1 tael. The buyers of these galls, which are possessors of wax-trees in Szetschnen or other provinces, take these packages with the galls and hang them on the bushy twigs of the wax-tree, after making some rough holes in the leaves for the progress of the gall inhabitants. Mr. Hosie does not give the name of this tree; he left that part to the director of the Kew Gardens, to whom he sent parts of the tree. The wax-tree is thought to be an ash and is called *Traxinus Chinensis.*

"Mr. Hosie observed, as soon as the gall packages were hung amongst the twigs, the following:

"Each gall contains a live 'buffalo-beetle' which bores a hole in the bark of the gall through which the larvæ escapes. At first they are unable to fly, and for sometime stay in company with some 'buffalo-beetles' of both sexes on the bushy twigs of the wax-tree, and after they get wings they lay small eggs and deposit them on the twigs. Afterwards the wax-insects crawl through the holes which was made by the 'buffalo-beetle,' and crawl rapidly on the twigs of the wax-tree; after a stay of about 13 days on the leaves of old twigs, and after they have shed their coat, they climb to the tender twigs where they settle on the under side to fasten their mouths in the bark whereby a liquid gushes forth and incrusts the twig with a thick layer of wax. Meanwhile, the eggs of the 'buffalo-beetle' hatch out also, and these insects are called the wax-hounds which follow the wax-insect for their prey; the latter are destroyed by the wax-grower. In about 3 months the wax crust is about ¼ of an inch thick, and the twigs are then cut off, the wax picked off by hand and thrown into boiling water, and the melted mass is moulded. This is the wax for the trade.

"The twigs are also boiled to be entirely cleared of the wax. The insects which sink to the bottom while it is boiling, are pressed out and given to the hogs for food. The owners of the wax-trees have but little expense, and the industry, on the whole, is very profitable. In good years, a package of Chien-Chang-galls costs about ¼ of a tael, which produces from 3 to 4 catties of wax. Its present price is 40 taels per pikol. In unfavorable years not more than one cattie of wax from a package of galls is expected, whereby the wax-industry stands a great deal of risk, where the owners of the wax-tree does not also have the insect-trees, and rears the insects himself. We mention that the latter is known to the entomologists as *Tutalimbata.*"

Thielmanton, ○Minu.

For the American Bee Journal.

Bees and the Fruit-Growers.

C. H. COGSWELL.

While attending the meeting of the Illinois State Horticultural Society, at Centralia, Ills., during the present week, I took occasion, in the interest of bee-culture, to inquire of some of the fruit-growers for their opinions and observations as to whether bees were in any way the natural enemies of fruit-growers. The unanimous expression, so far as I obtained it, was in favor of the bees. All admitted that, at times, bees work largely on the juices of fruits, but none believed that they puncture the skins of grapes or other fruits.

In some localities in the southern part of the State, much complaint was made against birds, particularly the cat-bird and oriole. One fruit-grower, in one of the lower counties, was said to have expended 200 pounds of shot on them. No complaint was lodged against the honey-bees. When other and better forage was scarce, they worked freely on grapes and other sweet fruits which had been punctured by birds, or which had burst their skins from diseased or luxurious growth. Such fruit, it was admitted, was of little value if not sucked out by the bees, for it would speedily decay or dry up.

A public expression of the Society might be valuable. Perhaps it has already been given, but I have not noticed it in former reports.

Virden, ♀ Ills., Dec. 11, 1885.

For the American Bee Journal.

Location vs. Cost of Production.

C. W. DAYTON, (116).

On page 728 of the AMERICAN BEE JOURNAL, for 1885, C. P. Dadant says that I "suggest very correctly that if the honey crop lasts only 20 days, there is no need of having any larger hives than the queen can well fill with brood between the winter and the few days previous to the honey crop." In this it is evident that he made a mistake of 17 days, which, added to 20, equals 37 days—about the length of time which is required to get bees from freshly laid eggs, into the fields as honey-gatherers.

Mr. Dadant also asks if the honey crop, throughout the Northern States, lasts only 15 or 20 days, as it does at times in my location. It will be found that I did not say that I had known the honey crop to last not more than 15 or 20 days in any location, but what I did say is this: "Provided the honey harvest lasted not more than 15 or 20 days, as that from white clover has been known to do, it would be wisdom to shut down on brood-rearing 15 or 20 days *before* the arrival of the honey harvest." From the sentence, "The honey harvest generally does not last more than 3, 4, 5, and occasionally 6 weeks, or 42 days," written by Mr. Chas. Dadant near the top of page 774 of the AMERICAN BEE JOURNAL for 1885, I infer that in his (C. P. Dadant's) location, the honey crop has been known to last not very much more than that length of time; and that 28 days is not very far from the average. That is how the honey harvest lasts in Illinois.

Mr. D. A. Fuller, on page 762 of the same volume, says: "I do not see how location can make any difference, as a large swarm is better at any time than a small one." Does Mr. Fuller fail to see how an average swarm at the beginning of the honey harvest may be equally as profitable as a larger swarm in the middle of the honey harvest? Can he get large swarms as early in the season as average ones, or does he have to hold his colonies back in the spring, in order to keep them from getting too strong? But perhaps Mr. Fuller is comparing large swarms with swarms of about the size that the third or fourth swarm from a colony generally is. Now I do not think that Messrs. Heddon, Hutchinson, or any one else, have expressed a liking for swarms of that kind, and though the hives used by them have been called small, it was not because they were too small for average colonies at the average time of the beginning of the honey harvest, in average locations throughout the Northern States; nor have they been called small hives because there was anything "teenty-taunty" about them, but because they are a shade smaller than some other hives which are in use, and because their size is best suited the wants of an average colony of bees when viewed from a dollar-and-cent stand-point.

I am aware that in a hundred colonies there are exceptions of perhaps 10 weaker and 10 stronger colonies than the average, and that one is necessary as a help for the other in making all colonies average.

While dealing in facts, we might say that it is a close, if not a desperate, race we will run if we make the colonies average 8 solid combs of brood by the beginning of the honey-flow. Yes, in my locality I have known whole apiaries to occupy 15 or 20 days of a heavy yield of honey from white clover, in gathering strength to be able to decently take advantage of a 4 or 5 days' flow of honey from basswood. In a case of this kind it is probably needless to say that the large swarms would not be very numerous, and it need not be an apiary of small (average) hives either.

Bradford, ♂ Iowa.

Read at the Detroit Convention.

The Pollen Theory.

A. J. COOK.

The pollen theory as I understand it, is simply this: Under certain circumstances bees may winter with less liability to diarrhœa, disease and death, in case there is no pollen or bee-bread in the hive to serve as winter food.

There are reasons drawn from experiment, I think, for the belief that facts sustain the theory. For several years we have tried to arrange our bees so that some should have abundance of pollen in their hives, while others should be destitute of the same, making a careful record in each case. While we have never lost a colony by diarrhœa during these experiments, we have had several cases of such disease, but never in colonies where the pollen was all excluded. In truth, the main portion of the diarrhetic excreta is almost always—if not always—composed of pollen grains, thus showing that pollen was present, if not the cause of the trouble. Careful examination of bees from colonies with no pollen—some dead, others alive and lively, show little and frequently no pollen in their intestines.

Now with the theory and these facts in mind, let us study briefly the nature of food, and see whether or not physiological science has any facts or suggestions to offer us regarding this question.

There are four kinds of food, each of which probably enters more or less largely into the food regimen of all animals. Of these the inorganic, such as water, lime, chloride of sodium, or common salt, etc., are important as entering into the structure of organs; preserving the requisite consistency of tissues, and in aiding the vital processes. Thus it is necessary that blood, or the nutritive substance of the animal body, should be liquid. A large proportion of water keeps it so; hence, what wonder that water is so essential to life, and so craved and sought after by most animals. In all vital activity, osmosis—or the passing of liquids through animal membranes, is all important; common salt promotes this osmosis, and thus it is that salt has such saving properties. Hence those of you who believe so heartily in giving water to bees may still rejoice in that you are improving the blood of your pets, while those who take pleasure in adding salt, may exult as you affirm, "here goes for osmosis!" These inorganic elements are usually obtained in sufficient quantities in the general food, though water is generally required in larger quantities and must be had in addition, separately, to secure the best health and greatest strength. We have all seen bees sipping water, and often in such places as to suggest that the addition of salt is very welcome to them. All kinds of food are required in greater quantity when the vital activity is increased, hence our bees will need more water as breeding, storing, or other work is increased in the hive.

The second kind of food is known under the term carbo-hydrates. It includes all the sugars and starch. As starch, when eaten, is changed under the influence of a ferment, into sugar, we may well consider it with the sugars. The carbo-hydrates consist of oxygen, hydrogen, and carbon —the two former in proportion to form water. It is a matter of common observation that when the carbo-hydrates enter largely into the food, the animal is apt to gain rapidly in fat. We are not sure that the sugars are changed directly into animal fat, possibly they serve so admirably as food, that they produce such an excellent condition of the animal system, that all the food is utilized, and a surplus is at hand which is stored up as fat. May be the nitrogenous food as well as the sugars aid in forming the fat of the body; in either case the food must be chemically changed in that wonderful laboratory, the animal organism. The fact remains that much sugar in the food promotes the deposits of fat. We all know how the feeding of corn increases the fat, and does not the fact that corn contains over 67 per cent. of starch, which when eaten and digested is all changed to sugar, enforce the position here taken? Again, when animals hibernate, or when they are long sick and take no food, the stored fat is used up. Thus, if this stored fat can for a time serve the purpose of all food, it is not unreasonable to conclude that all organic food may under the best conditions be converted into fat. We positively know that animals may eat all muscle—as beef's heart—and yet the liver will form glycogen, which in turn becomes liver sugar, and, as we have seen in the marvelous economy of the body, sugar promotes the formation of fat, it may be that all food under the best conditions conduces to the storing up of fat, and that sugar powerfully aids to bring about just this most favorable condition. These carbo-hydrates are often styled the heat-producing foods. I think this term false and misleading. It is probable that all food, of which these sugars are an important part, are to nourish or to build up tissues and carry on the organic processes. This vital work generates heat. Heat is incidental. Nutrition is to build up and keep the body in working condition; in doing this the body is kept warm.

We have seen that stored fat in animals that hibernate, and in case of disease, will alone serve to keep up the nutrition. We have also seen that these carbo-hydrates conduce more than other food to the formation of this fat. Is it not scientific then to urge that the pure carbo-hydrates are the best food on which to winter our bees? And this is enforced, I believe, by experience and by nature as well, for I doubt not but that in most cases in nature, almost the entire food of bees while they are quiescent in winter, is honey.

Let me state further that cane sugar which composes from one to eight per cent. of honey, when eaten by any animal, man included, is changed in the stomach to a sugar much like, if not identical, with honey. The bees do the same with nearly all the cane sugar or nectar, or with most of the cane sugar when they feed upon it. Hence it is more than likely that honey is one of the most healthy and nutritious of all our sugars; that the bees have done for us what we would have to do for ourselves had we eaten the cane sugar. Who has not found that honey seems to go further, and satisfy more quickly, even than cane sugar when eaten on our tables? One more point, common glucose, or grape sugar,—I now mean the artificial product produced by the action of sulphuric acid on corn starch—honey, and liver sugar are usually all called glucose or grape sugar by chemists. They are chemically identical, and give the same reactions with the copper salts which they all reduce, which fact furnishes one of the best tests for these sugars. Yet I do not believe they are the same. Physiologically they seem quite different. Why, when we eat glucose, is it changed to glycogen in the liver and then to liver sugar, unless the latter is more easily assimilated? Why do bees thrive on honey, and die when fed the artificial glucose? Why do bees refuse to eat artificial grape sugar when honey or nectar is to be had? All these facts seem to indicate what I believe to be true, that physiologically honey, starch, glucose and liver glucose are really different. Taste and vital action are nicer chemists than our scientists, and detect differences which the latter as yet fail to recognize. It is possible that honey and liver glucose are identical. The fact that both arise in the animal body under the influence of the digestive ferments would make this view plausible.

The third group of food elements consists of the fats. The higher animals obtain these largely in all vegetable and animal food. While the fats, also called by some the hydrocarbons, consist of the same chemical elements as do the carbo-hydrates, the oxygen is far less in amount. Actual experiment has shown that higher animals thrive poorly without some of this kind of food. Its value is farther attested by the appetite which craves fat, especially if the weather is cold. Bees get some of this kind of food in their pollen. It seems quite likely that the stored fat of the body may come in part from the fat eaten, though this is not certain. It is certainly true that all does not, as animals are often known to store much more fat than is taken with their food. It is quite likely that most fat eaten goes to serve the current needs, while some of the carbo-hydrates and the nitrogenous food, and quite likely some fat is, through the wonderous economy of the vital organism, changed into and stored up as fat. That nitrogenous tissues may be robbed of their nitrogen and further changed into fat, is proved by disease where fatty degeneration is noticed. This may occur in all organs. In some cases, as in fatty degeneration of the heart, almost pure muscle is transformed into fat. Bees get but little fat in their food, and so this group of food elements interests us less than do the others.

The albuminoids or nitrogenous food elements make up our last group. These have, in addition to the oxygen, hydrogen and carbon—nitrogen. All protoplasm or active vital tissue, whether animal or vegetable, consists largely of this nitrogenous material. But as all organs get their substance from the food, it becomes evident that the albuminoids are absolutely essential in food. Higher animals get this albuminous food in all vegetables, in muscle, eggs, cheese, etc. Bees also get it from vegetables, usually from honey which contains from .2 to .6 per cent. albuminoids and from pollen, often from fungoid spores, and occasionally from various kinds of flour or meal. This kind of food *must* furnish the elements for building up all the protoplasms of the body which form a large proportion of all the vital organs and tissues. We have already seen that some of this nitrogenous food may be transformed into fat.

As no animal can possibly be developed from the egg to adult life without this albuminous food, and, as in all vital action, some of this material in the body is used up and must be restored, it follows that brood-rearing in the hive and activity of the bees necessitates the presence of these albuminoids in the food.

As honey contain no albuminous food, except the pollen in it, it follows that bees must have bee-bread to rear brood, and also to preserve their organisms intact during the busy part of their existence. To say that bees may breed with no bee-bread, or that the active workers need none, is to say that you can have an ocean without water, a desert without sand, or bricks without clay.

We know that hibernating animals, and animals long sick, often fast for months. Yet here the vital forces must be kept up and must have nourishment. We have seen that in such cases the fat is used up, and without doubt the protoplasm in muscle and other inactive tissues yield up of their substance to furnish the small amount of albuminous nutriment needed. If we could keep our minds and bodies wholly inactive, we should need but little nitrogenous food.

We may conclude then, reasoning from real hibernation, where animals are wholly inactive, from cases of long sickness, and from higher animals in a state of quiescence, that our bees during their winter quiet in cellar or clamp, when the vital activities are at a minimum, have enough of the albuminoid elements in blood and tissues and may thrive on a pure carbonaceous diet. Analogies, as pointed out, make the hypothesis tenable.

Again, bees are naturally very neat and do not void their excreta in the hive except under the severest stress of circumstances. I have more than once gathered all the refuse under a full colony of bees at the close of the of a long winter's sojourn in the cellar, and found almost no nitrogenous matter. If, then, bees are to be forced to long confinement, we should spare no pains to secure the greatest possible quietude. Just the proper temperature, I think, will, under favorable circumstances of food and air, secure this quiescence. But in case the temperature or ought else should irritate, then it were better that no pollen should be eaten, for without it breeding, which demands great activity, would be impossible, and in its absence the active digestion necessary to liquify albuminous food would be avoided. It is a generally recognized fact that an inactive life needs little, and is better with little albuminous food. Indeed, albuminous food, as we have seen, subserves the vital activities; of course, then as we reduce these, we reduce the required amount of nitrogenous aliment.

Again, the indigestible portion of the carbonaceous food, especially the carbo-hydrates, is very slight. Not so with pollen. We can readily see then that where the feces are to be retained in the intestines as long the pollenaceous food would be or might be irritating, and were better withheld.

We thus see that from experience, from analogy, and from what we know of foods and the vital activities, we may well believe that our bees were better off in many cases were pollen absent from their winter aliment.

Agricultural College, ♀ Mich.

For the American Bee Journal.

The Marshall Co., Iowa, Convention.

The Marshall County Bee-Keepers' Association met at the Court House in Marshalltown, Iowa, on Oct. 17, 1885, President O. B. Barrows in the chair. The minutes of the April meeting, as published in the AMERICAN BEE JOURNAL, were read and approved.

The subjects, "Fall and winter care of bees," and "Care and sale of honey," were discussed. It was the general impression that all should work together in keeping up the price of honey, and also should endeavor to put up honey in neat packages, and pay no attention to the jammed up mess that is offered for sale in tubs, boxes, etc., at just any price that a buyer feels disposed to give. The consumers, as a rule, will give double for comb honey in nice, straight combs in one and two-pound sections, than they will for honey of various grades and cut out in all kinds of shapes. We must not put our first-class honey on the market to compete with this class in price.

A number of the members made their reports for the past season, but this is omitted at this time, as we desire to get a more complete report at our next meeting.

The subject for discussion at the next meeting will be "Spring management of bees," and the following members were appointed to read essays: L. Coeper, "Honey-plants;" G. W. Keeler, "Extracted honey;" W. P. Covey, "Comb honey;" and Mrs. J. M. Van Meter, "Bee-keeping."

The convention then adjourned to meet at the Court House in Marshalltown, Iowa, on Saturday, Jan. 16, 1886, at 10:30 a.m.

J. W. SANDERS, *Sec.*

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Local Convention Directory.

1886. *Time and place of Meeting.*

Jan. 13—15.—Nebraska State, at Lincoln, Nebr.
W. F. Wright, Sec., Johnson, Nebr.

Jan. 16.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Jan. 19.—N. W. Ills. & S. W. Wis., at Freeport, Ills.
Jonathan Stewart, Sec., Rock City, Ills.

Jan. 19—21.—Maine, at Skowhegan, Me.
Wm. Hoyt, Sec., Ripley, Me.

Jan. 20, 21.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Jan. 20, 21.—N. E. Ohio & N.W.Pa., at Meadville, Pa.
C. H. Coon, Sec., New Lyme, O.

Jan. 21.—Champlain Valley, at Middlebury, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Jan. 23.—Hancock County, at Findlay, O.
S. H. Bolton, Sec., Stanley, O

Jan. 26—28.—Eastern New York, at Albany, N. Y.
E. W. Philo, Sec., Halfmoon, N. Y.

Feb. 4.—Wisconsin State, at Madison, Wis.
Dr. J. W. Vance, Sec., Madison, Wis.

Feb. 3.—N. E. Michigan, at East Saginaw, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

No Sign of Disease.—R. F. Holtermann, Fisherville, Ont., on Jan. 4, 1886, says:

My bees (in clamps) had an opportunity for a flight on Dec. 30, the weather being sufficiently mild, but only the very strongest availed themselves of the warmth. I consider this a very favorable omen; if the others had been restless they doubtless would have shown themselves. Those flying showed no sign of diarrhea.

Mild Weather, etc.—John Morris, Mauston,⊙ Wis., on Jan. 1, 1886, writes:

The winter, so far, is getting to be what I would call a very mild one, and it should make bee-keepers happy. Wisconsin is not so bad after all, but when she does her best we generally shrink before the wintry blasts. To get the AMERICAN BEE JOURNAL for one dollar a year seems like getting a good paper for half what it is worth. The questions that are answered in the Query Department alone make the paper worth more than the subscription price to any one having a few or more colonies of bees. They cannot well afford to get along without it.

Good Swarming Season, etc.—W. G. Russell, Millbrook, Ont., on Dec. 31, 1885, writes:

I have now about 140 colonies of bees packed for winter, 122 of which are in chaff or sawdust hives, and the balance are packed in forest leaves in a long bin or house. Last winter I lost only 7 light colonies out of 84. The past season has been only a medium honey season, but an extra good swarming season. We have had an open, warm fall, and we have had only about ten days of sleighing so far this winter. It all went off about a week or ten days ago, and has not returned yet. Bees are flying a little to-day. The temperature is about 48°.

Bee-Keeping for Women, etc.—Mrs. Dr. E. H. Mason, New York,⊸ N. Y., on Jan. 1, 1886, writes:

I am still engaged in bee-culture, and must insist that it is a pleasant occupation and healthful for women. I still own property in Vincennes, Ind., and I go there the last of April to set my bees to work. I manage them entirely myself all summer. On Sept. 1 I prepare them for winter under water-proof sheds, facing them south, with a close board-fence at the back. I allow them to fly when it suits them, and forbid my tenant to even go into that part of my premises. I think that the reason I am so successful is that I put my bees up in September, and never allow them even to be jarred or moved until spring. I have always managed my bees that way, and I have never had them freeze even in the coldest weather. I have at present 80 colonies. I have resided in New York from September until April, for the past three years, so I am a citizen of the East for eight months of the year, and a citizen of the West the balance of the year.

Light Honey Crop.—H. N. Graves, Palmyra,⊸ Wis., on Jan. 1, 1886, says:

On April 8, 1885, I took 10 colonies of bees out of the cellar, 5 of which died with "spring dwindling," and 2 more were robbed, so that left me 3. I bought 15 colonies more, and have had very good success, considering the season. It has been very rainy, and the honey crop was very light. I put 40 colonies in the cellar on Dec. 6, 1885. My crop consisted of 700 pounds of comb honey, from 18 colonies, spring count. I have sold all my honey at 15 cents per pound at home.

My Experience in 1885.—S. J. Church, Cedar Rapids,⊸ Iowa, on Jan. 4, 1886, writes:

I commenced the season of 1885 with 78 colonies, some of which were very weak, but the most being in fair condition. My winter losses were 6 in the cellar and 9 after putting them on the summer stands on April 1. After a few days I moved them about ¾ of a mile, into an orchard of apple and cherry trees. They built up finely on fruit-bloom. On June 1 the white clover began to open a little, and it bid fair to be a large crop; also the basswood was very promising; then came a fearful hail-storm that cut everything down clean, trimmed the fruit-trees and basswood badly, and the clover looked as if the life had been pounded out of it; and when I "viewed the landscape o'er," and saw the desolation, my hopes were completely blighted, but in a few days the clover started up and bloomed so that I got about 1,000 pounds of honey by July 10. Then the bees got some honey from basswood outside of the track of the hail-storm. It has been a hard honey season for me. My increase of colonies was 32, mostly by natural swarming. After doubling up some colonies I had 105 left, nearly all of which were in good condition to put into the cellar for winter, which I did on Dec. 7. They are now in a very quiescent state, at a temperature of 46°. During the season I took 1,500 pounds of extracted honey and 200 pounds of comb honey. My expenses were $126.95 and my receipts $132.48.

Hives from Artificial Stone.—John Turnbull, La Crescent,○ Minn., writes thus concerning a new material for making hives:

I have been keeping bees for 18 years, but I never gave them much attention until about 2 years ago. I now have 22 colonies in the cellar. I have learned more about bees in the few months since I have been taking the AMERICAN BEE JOURNAL, than I had ever learned in all my life up to that time. I recently had a conversation with a stone-firm here, about making bee-hives out of their artificial stone. They said that such hives would be much better than wooden ones, as they would not be affected by the hot sun in summer, and as the material is a non-conductor of heat, neither would it be affected by the cold. Hives constructed of such material would be light and durable, and a hive of the Langstroth size would weigh about 30 pounds, and cost 30 cents. I intend to give them a trial. I would be pleased to hear through the columns of the AMERICAN BEE JOURNAL what our practical bee-keepers think in regard to stone houses for our bees.

Reversible Frames, Section-Cases, etc.—T. M. Coleman, Glendon,○ Iowa, on Jan. 4, 1886, writes:

In the report of Mr. Jeffrey, of Connecticut, on page 821 of the AMERICAN BEE JOURNAL for 1885, I notice that he says, "One apiarist has tried the 1⅜-inch wide end-bar, with reversible wire," etc., and I would like to know more about them. I am puzzled to know how to reverse frames, hives, and section-cases, in the best manner. I use a Simplicity hive of the Langstroth size, 14 inches wide, 9 frames, ⅞-inch top and end bars sawed out of plastering lath, and spaces between the frames filled with sticks sawed off of lath used for frames. The ends of the hive are rabbeted, and have tin strips for the frames to rest upon. When tiering up I take the sticks out and place another hive, or half hive for sections, on top; all have square joints, and no fastenings of any kind. The top and bottom boards are alike, 18 inches wide and 24 inches long, with cleats only on the ends to keep them from warping. They are dressed and painted on both sides, but have no fastenings, thus making the cheapest and simplest hive I ever saw. But I want some way to invert frames and cases for sections, and Mr. Jeffrey's plan seems to me the best I have heard of, but I do not understand the "reversible wire" nor "Quinby standing frames," or how they could be used one time as standing frames and at another time as hanging frames. I have kept bees for 3 years, have read books and papers, and have learned enough to make me anxious to know more. Last winter I lost 17 colonies out of 29 in an outside cellar or "cave" where it froze considerably. Now I have 24 colonies in good, warm cellars, and I obtained 1,164 pounds of honey from them last season, about half of it being comb honey and the balance extracted honey.

Colonies Packed for Winter, etc.—Robert Osborne, Danville,○ Ills., on Dec. 31, 1885, writes:

In the fall of 1884 I had 74 colonies; I sold 6, and started in the winter with 68—59 packed on the summer stands, 2 without packing, and 7 I put into the cellar. When the time came that bees could make their living again, I had 48 colonies left, *i. e.*, if I call every one that had a queen a colony, but there was quite a number that were very small nuclei colonies that required lots of help to get them ready for the honey-flow, which was good in this locality, while white clover and basswood lasted. By July 20 I had increased my apiary to 87 good colonies, and had taken 2,000 pounds of comb honey in 1 and 1¼ pound sections, and I had extracted 1,000 pounds. The bees did not do much in the sections after that, but stored everything full in the brood-chambers. My honey crop for 1885 amounted to 2,300 pounds of comb honey, 1,400 pounds of extracted honey, with an abundance to carry the bees through without feeding sugar. I have 60 colonies packed on the summer stands, and 27 colonies and 1 nucleus in the cellar under the house. I have sold nearly all of my comb honey and about half of the extracted.

The New Bee-Disease. — W. B. Thorne, Glenn,○ Kans., on Jan. 4, 1886, writes:

As I asked Query, No. 133, it might be well if I should report progress concerning the bees there mentioned. About 3 weeks prior to the meeting of the "Western Bee-Keepers' Association," held at Independence, Mo., on Oct. 15 and 16, 1885, I determined to try and see if the stores that the colony had was the cause of the malady. I took the stores from them and gave it to another colony that was in a healthy condition; no injurious effect resulted therefrom. I then gave the diseased colony sugar stores; no benefit appeared to result. I therefore determined to take them 20 miles in a wagon, to the *savants*, for treatment; but no one could prescribe for them. I was not in a mood to drive with becoming respect to a colony of bees; however, contrary to my expectations, after the good shaking up of a 40-mile ride, they improved very rapidly, and are now tucked up snugly in the cellar, and I expect to get them through the winter in good condition. They however kept a few drones up to the last examination, which I made about Dec. 15. My advice is to take bees to your local conventions, if you have any that are troubled with the new malady; and if you have no diseased bees to take, do not let that detain you from attending, for there is money in it.

Convention Notices.

☞ The annual Convention of the Indiana State Bee-Keepers' Society will be held at Indianapolis, Ind., on Jan. 20 and 21, 1886. The meetings of this Society have been very successful in the past, and the coming meeting promises to be still better. The meeting will be held in the rooms of the State Board of Agriculture, and it is one of a series of meetings held by the different Societies of the State, which pertain to the specialties of Agriculture, viz., Dairying, Wool-Growing, Swine-Breeding, Poultry-Raising, etc. Reduced rates are offered at Hotels, and everything possible will be done to make the meeting entertaining and instructive. A very complete program is being prepared, with ample time to discuss the important subjects of particular interest to bee-keepers. A cordial invitation is extended to all bee-keepers, with the hope that they will attend, and thus make the Convention of still greater importance.

FRANK L. DOUGHERTY, *Sec.*

☞ The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Freeport, Ills., on Tuesday, Jan. 19, 1886.

JONATHAN STEWART, *Sec.*

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 21, 1886.

R. H. HOLMES, *Sec.*

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will hold its seventh annual convention at Meadville, Pa., on Wednesday and Thursday, Jan. 20 and 21, 1886. C. H. COON, *Sec.*

☞ The Eastern New York Bee-Keepers' Association will hold its annual convention in Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, January 26—28, 1886. The first session will begin on Tuesday, at 2 p.m. All interested in bee-keeping are requested to attend, and bring apiarian supplies for exhibition. The programme will consist of essays on important subjects, discussions, etc.

E. W. PHILO, *Sec.*

☞ The Hancock County Bee-Keepers' Association will meet at Findlay, O., on Saturday, Jan, 23, 1886. S. H. BOLTON, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The Wisconsin State Bee-Keepers' Association will meet in the State Capitol at Madison, Wis., on Feb. 4, 1886, at 9 a.m. All who are interested in bee-keeping are invited to attend. The meeting will be held during the sessions of the State Agricultural Society, and bee-keepers who are also interested in topics relating to farming will have an opportunity to hear them discussed. Any bee-keeper having anything new in the management of bees are requested to bring it along for exhibition. Persons paying full fare coming, may obtain a return ticket at one-fifth of the regular rate.

J. W. VANCE, *Sec.*

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Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

"**Don't Stop**"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

◆

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

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☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 11, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 6@8c. per lb.

BEESWAX.—24@26c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for comb honey is very flat and inactive, which we attribute to the continued warm weather, and prices are ruling correspondingly. We quote as follows: Fancy white comb in 1-lb. paper cartons, 14@15c.; the same in 1-lb. glassed or unglassed sections, 13@14c.; the same in 2 lb. glassed sections, 10½@12c., and in unglassed 2-lbs., 12@13c. Buckwheat honey in 2-lb. sections, 9@10c.; in 1-lb. sections, 11@12c. Extracted—white clover, 6½@8c.; buckwheat, 5½@6½c.

BEESWAX—Prime yellow, 25@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4@8c a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12@15c. per lb.

BEESWAX.—Good yellow is in good demand, and arrivals are fair, at 20@22c. per lb.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14@15c.; 2-lbs., 12@13c. Dark fall honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very fine extracted honey this week at 5c., and stocks continue to accumulate.

BEESWAX.—Scarce and higher—22@25c.

CLEMONS, CLOON & Co., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote comb honey in 1-lb. sections at 14@16c., and 2-lb. sections at 12@14c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10@12½c.; amber, 7@8c. Extracted, white liquid, 5¼@5½c.; light amber colored, 4½@4¾c.; amber and candied, 4½c.; dark and candied, 4@4¼c.

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◆

Many Thanks are due to our friends for sending us so many *new* subscribers, when renewing their own subscriptions. The reduced price for 1886 has caused quite "a boom," and is a *popular* move in every sense of that word. As we do not wish any one to work for nothing, we have concluded to offer premiums for *new* subscribers for 1886, for in order to compensate for the reduction of our price to $1.00, we should at least *thribble* our present subscription list.

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Hybrid Bees, per pound,	1.50	1.25	1.00	.80	.60

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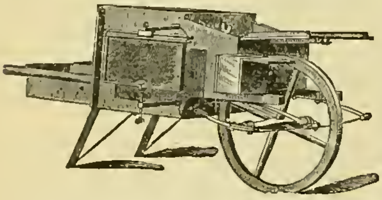

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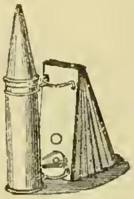

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Jan. 20, 1886. No. 3.

◆

A Queen-Cage is on our desk from Chas. Kingsley, of Bossier Parish, La. It is made entirely of wood, and is simple and durable.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

We are Now Deluged with correspondence, and we are several days behind with our answers to letters upon multitudinous subjects, and shall not be able to "catch up" for several days yet. Our correspondents will please exercise a little patience. We shall "get there," we hope, this week.

◆

Mr. C. F. Muth, the popular honey merchant and supply dealer of Cincinnati, Ohio, took his son into the business as a partner on Jan. 1, 1886, as will be seen on page 48 of this issue. The BEE JOURNAL wishes the new firm success.

◆

The President of the North American Bee-Keepers' Society has given some hints to the Vice-Presidents on page 42. It will be necessary for them to act at once, for the meetings of the managers of Fairs will soon take place. Let there be good bee and honey shows everyhere. They help honey consumption by informing the public concerning the desirability of eating honey.

◆

Some Fool in Hudson, Mich., having read Bro. Root's offer, in *Gleanings*, of $1,500 for a sample of the artificial comb-honey said to be "made and filled with glucose by new machinery" (*a la* Wiley), sent to this office for a sample of it, and without waiting for a reply, wrote to Mr. Root, accepting his offer. We wrote him that it was a "hoax;" that "there was no such thing made," etc. Had he waited for our reply, he would not have dared to accept Mr. Root's offer. "The fools are not all dead"—here is a genuine sample of the modern "go-ahead" class.

A Brief History of the North American Bee-Keepers' Society, with a digest of its 15 Annual Conventions, and a full Report of the Proceedings of the 16th Annual Convention held at Detroit, Mich., on Dec. 8 to 10, 1885. This is the title of a new pamphlet of 64 pages just issued at this office. Price, 25 cents.

To compile this history and digest of all the past meetings of the Society, has taken much time and labor, and we have no doubt but that it will be duly appreciated by the apiarists of North America. The following is a portion of the "Introduction:"

> Life is too short, and Americans are too busy to spend the time necessary to delve into a multitude of volumes in order to post themselves on the general history of the past in reference to the formation of Societies of Apiculture. They have long needed a digest of Convention History in general, and of the Continental Society in particular. They want to know what was done, and what subjects were discussed at the former meetings. Heretofore this could only be ascertained by carefully examining over 20 volumes of the AMERICAN BEE JOURNAL, and other papers; and some of these are possessed by comparatively very few of the apiarists of to-day.
>
> In the following pages, we have endeavored to supply this want by stating the place and time of each meeting of the Continental Societies during the past 25 years, and naming the principal officers elected, as well as to note all the business of importance transacted.
>
> We have also mentioned all the subjects discussed, and enumerated all the essays read at each meeting; so that the history is complete, without a broken link, so far as it can be ascertained at the present time, and we feel sure it will now become a book of reference in our National gatherings.
>
> Frequently have the members of the Society voted to have the proceedings published in pamphlet form, but so far the Society has done it but ONCE, and then only published one-third of what was voted to be done, by publishing the report of one convention instead of three.
>
> In 1877 the publishers of the AMERICAN BEE JOURNAL issued a pamphlet of 32 pages containing a report of the Convention of that year. They also publish this pamphlet at their own expense, and have published a report each year, varying from 4 to over 40 pages, in the AMERICAN BEE JOURNAL.
>
> Only a few years ago, at one of the annual meetings, no one had even a list of the officers for the year, (the Secretary being absent); at other meetings, persons were elected to fill offices not warranted by the Constitution, which had been amended, re-amended, and the amendments entirely lost sight of. There will be no excuse for such things hereafter; if this pamphlet is consulted, confusion will be avoided.
>
> The organization of Societies are of immense advantage to our pursuit, and help to obtain for it that recognition which it richly deserves among the productions of America. They open up avenues of trade for honey by informing consumers concerning its excellence for medical and mechanical purposes, confectionery, table use, etc.
>
> They help producers by looking after their interests in the use of the mails for the transmission of bees to all parts of the world, and the use of the railroads for the shipping of honey and getting it into the proper classifications, etc.

This pamphlet also contains engravings of the principal honey-plants, and portraits of the Rev. L. L. Langstroth, of Ohio, and Moses Quinby, of New York; two of the pioneers who helped to revolutionize American apiculture, and usher in a new era.

A Revolution in Bee-Culture is what the Rev. W. F. Clarke predicts for the new system of management as given in Mr. James Heddon's new book. It is evidently a veritable "new departure," and something worthy of the attention of all honey-producers. Some have but little doubt of its being second only to the invention of the movable-frame hive and system of management invented by the Rev. L. L. Langstroth; and say, if the adoption of movable-frames created a revolution in the methods and management 30 years ago, surely invertible hives, and consequent ease of manipulation by hives instead of frames, will cause a *second revolution*.

Without endorsing the system of management, we must accord to the inventor the acknowledgement that it is *new* and *original*. So far as we know, no one has ever before advocated the making of the brood-chamber in two sectional parts, in order to obviate the necessity of the continual handling of frames. If this system shall prove to be all that is claimed for it—*it will* cause a revolution in bee-management! To handle hives instead of frames will certainly lessen the labor, curtail the expense of honey-production, and add much to the pleasure of keeping bees.

Scores of prominent apiarists are investigating the matter, and many have already endorsed it, in the main. Some have raised objections to the practice of reversing brood-combs, but, as we understand it, Mr. Heddon's system is to interchange the brood-combs in horizontal sections, and thus accomplish nearly all that reversing combs would do, but doing it *without inverting a cell.*

We must say that we are considerably captivated with the system, as detailed by Mr. Heddon in his book, and shall investigate it further, as soon as we can procure a hive. Our readers will be informed concerning the conclusions we have arrived at in a future number of the BEE JOURNAL—perhaps next week.

◆

Mr. S. X. Clark, of Delavan, Wis., died of heart disease on March 17, 1885. He went to work in his shop on that morning apparently as well as ever, and Mr. J. S. Wright writes us that he found him there, one hour later, dead. Mr. Wright should have made this public long ago, and then he would have been enumerated in the roll of "Apicultural Necrology," read at the late Convention at Detroit. Mr. Clark was one of the *fathers* of the North American Bee-Keepers' Society; an enthusiastic apiarist, and a good man generally.

◆

Dr. Tinker has sent us a sample of his new "side-passage sections." They are very nicely and accurately cut.

◆

The Canadian Duty on Beeswax.—On page 819, Mr. Holtermaun refers to this matter. We asked Mr. D. A. Jones to explain the matter, which he does as follows:

> "We referred to the duty being removed from *Bees* (not beeswax), and we have been mis-reported. Some effort was made at a late session of Parliament to have the duty taken off of wax, but owing to the fact that the matter was brought before the committee appointed to revise the tariff, at too late an hour, the change could not be made."

QUERIES

WITH

REPLIES by Prominent Apiarists.

Queen-Nurseries.

Query, No. 183.—Is the queen-nursery practical? I mean, is it used by the majority of queen-breeders and honey-producers, or only in occasional instances? Are there real advantages in it?—D

I use it and value it highly.—G. M. Doolittle.

Yes, and by some it is used with excellent success, if not by the majority. Yes, there are advantages in it.—A. J. Cook.

It is a great convenience. It is used by many queen-breeders, whether by a majority or not I do not know; but few except queen-breeders need it.—W. Z. Hutchinson.

It is doubtful if the queen-nursery is better than the lamp-nursery; in either case the queens will hatch out all right if the cells are left with the bees until they are ripe; *i. e.*, until they turn reddish brown at the tip, which is from 1 to 3 days before the queen emerges.—G. L. Tinker.

A great many of such things depend upon our habits, perhaps even upon prejudices and whims. I have never had a queen-nursery, yet I know many good bee-keepers use them, and it is quite possible if I once used one I should think I could not get along without it.—C. C. Miller.

It depends upon what you mean by "the queen-nursery." If you refer to the modern nursery, made of cages adjusted in a case or frame, so as to be hung in the hive, it is practical and practicable, though not in use by a majority of queen-breeders, much less honey-producers. It takes time to introduce *generally* any good thing. To me there is real advantage in its use. When I have spare queen-cells I can save them by transferring them to the nursery. It is costly to rear queen-cells as they should be reared, and it pays to save them when rearing queens for sale.—G. W. Demaree.

It is practical, and is used by many able apiarists. As to whether so used by the majority, is a question for the census taker. There are real advantages in it, to the breeder of queens in large numbers, but not in my judgment to one who desires to rear only a few queens for home use in a small apiary.—J. E. Pond, Jr.

I believe it is. I do not know whether a majority of queen-breeders use it or not, but if the majority do not, they seem to me to be where I was when I did not use it. It not only more safely hatches the queen-cells, but more uniformly and surely, for it preserves a more uniform and proper temperature than is the rule within hives.—James Heddon.

Laying Workers.

Query, No. 184.—Are laying workers fecundated?—F. K.

No.—C. C. Miller.

Of course not. They cannot be.—Dadant & Son.

No.—A. J. Cook.

Not by the direct intervention of the male. Some of us believe that the causes which produce the effects we see in the laying-worker and the unfecundated queen, are reproduced periodically in some way not now fully understood. What a field is open here to the student of nature.—G. W. Demaree.

No.—H. D. Cutting.

A single instance only, to my knowledge, has ever been given of a worker having copulated with a drone. This case occurred in the old country, and is well authenticated. I do not believe that fecundation could follow such copulation. As in Query, No. 185, it would require far more space than can be spared to give a philosophical answer. The text-books on bee-keeping all explain the subject quite fully.—J. E. Pond, Jr.

No.—G. L. Tinker.

No.—G. M. Doolittle.

Yes, any worker-bee that lays eggs is fecundated by something. I have no idea, however, that they are ever fecundated by drones, as are queens. As of Query, No. 185, my belief is formed from the statements of those who have made the matter a study.—James Heddon.

No.—W. Z. Hutchinson.

Eggs that Produce Queens.

Query, No. 185.—Are queen eggs, when first laid, male or female?—T. F.

Yes.—C. C. Miller.

Yes, male or female, of course; but a differential diagnosis would floor me. If the querist has reference to a change of sex by the worker bees, I would say it is never effected.—G. L. Tinker.

Female.—A. J. Cook.

An egg that produces a queen is a female egg when laid.—W. Z. Hutchinson.

Female.—H. D. Cutting.

I have not made, and am not competent to make examinations that amount to proof. I leave this to our entomologists and chemists, and take their word for it. Should they err, and inadvertently deceive me regarding this matter, such deception would not lessen my honey crop.—James Heddon.

"Much depends." As a rule, eggs deposited in worker-comb are female, and those in drone-comb are male. There are exceptions to this rule, however. To explain fully would require a long article, and as such explanation will be found in any of the text-books, I refer T. F. to them.—J. E. Pond, Jr.

Female, if worker eggs are such.—G. M. Doolittle.

If there was any such thing, properly speaking, as a "queen egg," I would say that it must of necessity be a female egg, because it produces a female of the highest order. There can be but the two kinds of eggs in the hive—male and female. The one kind produces the male or drone, the other the female, queen or worker. The same female egg that will produce a worker, which is an undeveloped female, will produce a queen when the conditions are right according to nature's method of developing the queen.—G. W. Demaree.

To make the question more intelligible, we would take the word "queen" out of it; then we would answer, the eggs are male when unimpregnated, and female when impregnated. In one word the answer is "parthenogenesis." Read a bee-book for an explanation of this word, which would be too lengthy here.—Dadant & Son.

◆

Convention Notices.

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 21, 1886.
R. H. Holmes, *Sec.*

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will hold its seventh annual convention at Meadville, Pa., on Wednesday and Thursday, Jan. 20 and 21, 1886. C. H. Coon, *Sec.*

☞ The Eastern New York Bee-Keepers' Association will hold its annual convention in Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, January 26—28, 1886. The first session will begin on Tuesday, at 2 p.m. All interested in bee-keeping are requested to attend, and bring apiarian supplies for exhibition. The programme will consist of essays on important subjects, discussions, etc.
E. W. Philo, *Sec.*

☞ The Hancock County Bee-Keepers' Association will meet at Findlay, O., on Saturday, Jan, 23, 1886. S. H. Bolton, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. Hambaugh, *Sec.*

☞ The annual Convention of the Indiana State Bee-Keepers' Society will be held at Indianapolis, Ind., on Jan. 20 and 21, 1886. The meetings of this Society have been very successful in the past, and the coming meeting promises to be still better. The meeting will be held in the rooms of the State Board of Agriculture, and it is one of a series of meetings held by the different Societies of the State, which pertain to the specialties of Agriculture, viz., Dairying, Wool-Growing, Swine-Breeding, Poultry-Raising, etc. Reduced rates are offered at Hotels, and everything possible will be done to make the meeting entertaining and instructive. A very complete program is being prepared, with ample time to discuss the important subjects of particular interest to bee-keepers. A cordial invitation is extended to all bee-keepers, with the hope that they will attend, and thus make the Convention of still greater importance.
Frank L. Dougherty, *Sec.*

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ⊸ east; ⟜ west; and this ♂ northeast; ⦸ northwest; ⦵ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

Mr. James Heddon's Bee-Book.

WM. F. CLARKE.

It is entitled "SUCCESS IN BEE CULTURE; as practiced and advised by James Heddon, Dowagiac, Mich."

The appearance of this work marks a new epoch in bee-literature, and heralds a revolution in bee-culture. These are strong words, but they are well-weighed, and thrown fearlessly down in the arena of public debate. Any gladiator, who is disposed so to do, is welcome to pick up the gauntlet for a friendly tilt over them. "Come on, Macduff."

Hitherto we have had only primary text-books in apiculture. I do not disparage them—far from it. They are excellent and valuable, as are the various issues of the first six books of Euclid in mathematics; but we have long needed something for the more advanced class of bee-keepers. Now we have it. Mr. Heddon's book does not jostle any other. It occupies a *niche* of its own. The tyro cannot understand it. A man must be a long way ahead of the *pons asinorum* in apiculture, or he had better let this book alone. Above all things, let no novice presume to criticize it!

Among the first things that strike one in reading these pages, is the transparent frankness of the author. Evidently he has no secrets. He owns his great indebtedness to others for ideas and suggestions. These have passed through his mental mint, been tested practically, and are now issued, along with his own original conceptions, in the form of gold and silver coin for free circulation among bee-keepers. There is a cool audacity as well as a charming frankness about this which I admire. It is like a general revealing his plans and tactics, and then saying to all comers, "I am ready to try conclusions with you at any time or place." It is a question, not of superior knowledge, but superior skill. The "best *man*" will "win." This is to run the race of life on the fairest and most honorable principles conceivable.

At a time when the honey market is low, and the prospect is that it may go yet lower—when some prominent apiarists tell us they can hardly produce honey at a profit at all, it is a real boon to have a practical and successful producer come forward and tell us how to minimize cost, and lessen labor. This, Mr. Heddon does with a minuteness of detail and force of reasoning which carry conviction right home. It is not too much to say that we have here a new and original system of bee-culture. I frankly own that it has burst upon me as a welcome and glad surprise.

Mr. Heddon's new book and new hive must be judged together. When, at the Detroit Convention, I listened to his description of the hive he had invented and recently patented, I was interested in some features of it, but the thing as a whole did not take any special hold of me. There were so many things at that memorable meeting calculated to set one thinking! I began to revolve that hive in my mind on the return journey. First one feature of it, and then another loomed up, each pleasing and satisfactory, until I said to myself, "Shouldn't wonder if this is that ideal hive I was dreaming about so often last summer!" When the circular arrived, giving descriptions and illustrations of the hive, I said, "Eureka!" in earnest. And now that I have got the book I am ready for the spring campaign!

In common with many others, I have become sick of such everlasting manipulation of frames, lost faith in any and every system of management that involves a constant disturbance of the brood-nest, and when I wrote that "rime" for the AMERICAN BEE JOURNAL, entitled, "A discontented bee," I felt that there was more truth than poetry in it. The idea of manipulating hives instead of frames, though it may seem very simple to some, and superficial thinkers may hastily conclude that there is nothing in it, is *just going to revolutionize bee-keeping*, and "don't you forget it," Mr. Pooh-pooh, whoever you are!

I intended to review Mr. Heddon's book, but I find that I can only call attention to it just now. I do not endorse it all, by any means. There are many things in it from which I dissent, and I shall do so, giving reasons therefor, in due time, in the AMERICAN BEE JOURNAL. I felt it, however, a simple, as it is a very pleasant duty, to put on record my sense of the great service which Mr. Heddon has rendered to the interests of practical apiculture in the publication of this volume. Let this acknowledgment embrace that other bee-keeper of large experience and eminent ability who has contributed many of these well-filled pages, and to whom Mr. Heddon constantly refers as "My Friend," because "he is somewhat averse to publicity." This title is only a kind of bee-veil, however, which does not altogether conceal the wearer. It is rare sport when two such Nimrods go out to hunt! If one misses, which he rarely if ever does, the other is sure to hit, and most of the game has two rifle balls in it!

I am glad to be able to write strongly in praise of Mr. Heddon's book, because he and I have fought so many hard battles on the printed page. We still disagree as to some phases of "the pollen theory," and I scarcely think he has done full justice to my theory of hibernation in the chapter on that subject, but I too have faith in "Father Time" and can afford to *wait*. It is gratifying to know that we are both in pursuit only of *the truth*.

It may be that some one who reads this article, and is not very well acquainted with me, will say, "What a big puff!" Now, I have been an editor for many years, and as such I have written all sorts of articles on all manner of subjects, but there is one thing I have never yet penned, and that is—"a puff." It is 22 years since I began to write on bee-keeping, and in all that time I have never had "an axe to grind" for myself or any one else. I have never been the hired scribbler for any man, clique, ring, or party. I have several times given offence by declining to write up merely personal and selfish interests. I once sacrificed a tempting and prominent position because I could not and would not write "to order." I can honestly say, that in all my rather voluminous contributions to the apicultural periodicals, I have never written a line except in the interest of the general bee-keeping public. This article, whatever its errors or defects may be, is a spontaneous tribute to what I regard as real merit.

Guelph, Ont.

For the American Bee Journal.

Small Hives vs. Large Hives, etc.

W. Z. HUTCHINSON.

Labor is the most expensive factor in the production of honey; and if, by having 60 hives instead of 40, the labor is thereby sufficiently lessened, there will be more profit even if 60 small hives do cost more than 40 large ones. Perhaps some will wonder at my assuming that the labor will be less with many small hives, than with few large ones; if the large hives are so large that one man cannot handle them with ease, and two are required, or else one man gets a lame back by handling them, the 60 lighter ones may be handled with less labor than the 40 heavier ones. Let us not forget the time is rapidly approaching when we shall manipulate hives more and frames less, and when this time comes the advantages will all be in favor of the small hive.

On page 774 of the AMERICAN BEE JOURNAL for 1885, Mr. Dadant says, that the man with the small hives will have more increase of bees, and consequently his expenses for new hives will be greater. Granted; but is not this increase worth hiving? If we cannot afford hives for our bees, we might as well "hang up our fiddle."

With the exception of one season, when the honey-flow was early and of short duration, I have received more surplus from a colony and its increase than from a colony that did not swarm;

and other bee-keepers have had a similar experience. But let us suppose that less honey is secured when a colony sends out a swarm; will not two colonies in place of one compensate for the lessened yield of honey and for the hives in which they were hived? If they will not, then the colony from which the increase sprang was obtained at a *loss*.

Mr. Dadant speaks of the greater number of surplus-cases that are needed with small hives, and argues that more work will be required to manipulate them. With small, light cases, nearly all the bees can be shaken out when taking off surplus honey; with large cases this cannot be done, as the cases are too heavy, and slower methods must be resorted to.

In Mr. Dadant's computations he said that there were a certain number of bees on *each* comb, and he told us how many combs there were. He *now* says that he puts on surplus-cases, and of course these cases must be filled with bees, which reduces the number of bees quite materially upon the brood-combs; and when we take these bees from the surplus-cases and a large part of them from the brood-combs, in the shape of a swarm, and put them into a new hive, the brood-nest of which has been reduced more than one-third, he will readily see that the surplus-cases are as well filled in the new as they were in the old hives. Mr. D. must make some new computations, if he adds a surplus apartment to draw off some of the bees, for as they now stand, they are incorrect.

He speaks of the increase of work occasioned by the removal of the surplus-cases to the new hives. This is but the work of a moment, and, even if it were more, it hardly seems fair to pick out one particular instance in which the work is increased; we must look at things in the aggregate. Bee-keepers are willing to work when the work will increase their profits more than any other thing they can do; they are also willing to use more costly implements, or employ capital in any manner when the expenditure is certain to increase the profits more than anything else they can do. These remarks will also apply to the time spent in hiving swarms; the remarks in regard to furnishing hives for increase will also apply here. If we cannot afford hives, and the time for putting our bees into them, then "good-bye," bee-keeping.

Mr. Dadant's 5th paragraph is not exactly clear to me. If I understand him aright, he would say that I do not have two queens until the young queen commences laying. True, nor do I have any use for her, as by the Heddon method of preventing after-swarms the old colony is kept so reduced in numbers that but little brood could be cared for if there were a queen. By the time she begins laying the bees have hatched in sufficient numbers to care for her eggs, and there is no danger of the brood-nest being filled with honey, because it is now reduced to only 5 combs, and, with a young queen just beginning to lay, it is the disposition of the bees to give her an abundance of room; they will even remove the honey from the brood-nest to the sections to give her room.

Mr. Dadant's experience, as given in the 6th paragraph of his article, in regard to small hives being filled with honey to the exclusion of brood, in the same proportion as large ones are, is exactly opposite to mine. This is the point that has been the very pith of all these arguments, viz., that with a small brood-nest the queen would occupy all, or nearly all, the cells in the brood-nest to the exclusion of the honey, which would of necessity be stored in the surplus apartment, whence it could be removed and sold at the highest market price. Mr. Dadant now says that there is nothing in this; that the amount of brood in a hive is in proportion to the size of the hive. I can best answer this assertion by quoting Mr. Dadant's own words. In his 8th paragraph he says: "Those who use large hives know which queens are the most prolific." True; that is the point exactly. When we have a prolific queen the large brood-nest is nearly filled with brood; but what happens when the queen is *not* prolific? Why, "5 to 20 pounds of the choicest honey is stored in the brood-nest." This is the manner in which those who use large hives learn which are their most prolific queens. How else can they learn it? But, as though "to make assurance doubly sure," Mr. D. in his last paragraph says: "Those who employ small hives do not know their most prolific queens." Of course not; and *why* not? Simply because *all* of the brood-nests are *full* of brood, they being of such capacity that an ordinary queen can keep them full and more too. Mr. D. thus refutes his own arguments.

PROLIFICNESS OF QUEENS.

Although this subject is of sufficient importance to deserve a discussion by itself, I here desire to say a few words about the extra prolificness of queens. I do not think that it is desirable, and I would not breed for it. My small hives settle the question to my entire satisfaction. At the season when I wish my hives full of brood they *are* full, *all* of them; hence I have no use for very prolific queens, as the hives are rather below the capacity of the average queen.

Aside from this, however, I value quality (in bees) above quantity. I agree entirely with Mr. O. O. Poppleton, when he says, on page 120 of the AMERICAN BEE JOURNAL for 1884: "How very common it is to notice two colonies in the same apiary, in the same kind of a hive, with about equal numbers of bees and brood, and, so far as the bee-keeper can see, in equal conditions every way, yet while the one gives a large amount of surplus honey, the other gives little or none. This is one of the most common experiences in bee-keeping, and shows conclusively that while a good queen is one of the essentials in successful honey-production, it is far from being the only one." Farther along in the same article Mr. Poppleton says: "My colonies that contain extra prolific queens are very rarely indeed among my best honey-gatherers."

I cannot conclude this article without thanking my opponent for the gentlemanly manner in which he has presented his arguments; there have been no "quibblings," nor "evasions;" and should he finally succeed in convincing me that he is right, I should not feel in the least chagrined, as no man need blush to have an error pointed out by Charles Dadant.

Rogersville, ♂ Mich.

For the American Bee Journal.

Wintering Bees in Cellars.

I. J. GLASS.

It is rather amusing to observe the different ideas on the wintering problem; so many specialists have the best plan, and nearly all differing, notwithstanding that the experiments are made in the same latitude. One says that the only proper method is on the summer-stands, and they never have any loss, except those colonies having inferior queens. Now note the margin for a plausible excuse, for the reports of those same parties would indicate that from 25 to 90 per cent of their colonies had inferior queens. One of those summer-stand advocates, living at our county-seat, out of 230 colonies lost all but 45, and he still contends that out-of-doors is the natural element of the bee.

Another good plan that we are advised to try, is to suspend the helpless little creatures in mid-air, with plenty of breeze from below so that they may sleep or hibernate. If I understand this system correctly it is too expensive to be of value to any except those having plenty of ready money. However unreasonable this system may appear, it is beginning to have advocates of marked ability; but my experience will not admit of my coinciding with the hibernation theory. I have examined my bees repeatedly with the thermometer ranging at various degrees of temperature, and I always find them easily aroused.

I gave my plan of wintering bees more than a year ago, which for me dispels all fears as to wintering them safely, and I notice that Mr. Heddon and Mr. Barber are advocating the same plan, except that the requisites are not the same with us all, for I have no ventilation pipes, no cushions or sticks under the quilts, and I take nothing but the brood-chamber in the cellar, with the quilt sealed tightly. I have them tiered up 3 hives high, and to-day (Jan. 9), while the temperature is 15° below zero, I would like to take the summer-stand advocates into my cellar, where the temperature is never below 40°, and note the joyful hum and perfect condition which can only be attained in a moderate temperature.

I do not crave an argument with any one—what I state in regard to my own apiary is not theory, it is simply facts. This is my third season in wintering bees in the cellar, and I have not lost a colony, either with or without an inferior queen. I do not care whether a cellar is wet or dry, so that it is *warm*. I know of two different apiarists who tried the cellar last winter, and lost all their bees. Upon ascertaining the condition of their cellars, I learned that they were not only wet but frequently cold. That I claim is worse than the poorest of outdoor wintering.

When Mr. Heddon answered the query on page 820 of the AMERICAN BEE JOURNAL for 1885, as to the proper size to have the hive-entrances in winter on the summer-stands, he spoke my sentiments exactly when he jocosely replied that he should pick up the entrances (taking the hives with them) and place them in a good cellar. I do not remember whether he said a warm cellar or not, but if he did not, he meant it. Those are just my ideas, backed by satisfactory experience.

In conclusion I would say that all who like can freeze their bees into submission, but as for me I prefer to provide them with good, warm quarters, and no matter what the condition of the atmosphere outside may be, when a visit is made them they will greet the visitor at the entrance with a joyful hum.

Sharpsburg, Ill.

For the American Bee Journal.

Curious Freaks of Bees.

C. W. DAYTON, (116).

Early in the season of 1883, as soon as the young bees began to play freely before the hives on sunshiny days, I noticed on the ground before one hive, that there remained a large number of bees that did not get back into the hive. At this time there were bees scattered about 2 or 3 rods from the hive, but not more than 3 or 4 in any one place. About the middle of the summer I superseded the queen in that colony and this in due time ended all peculiar actions of the bees, until the next spring, when I found another colony in the same attitude, except that the bees, when they remained out, did not scatter themselves over so much ground, but remained nearer the hive, and when night came they huddled together in the hollows in the ground, some of which hollows contained a quart or more of dead bees that had accumulated there in the course of a week or less. The queen in this colony remained unchanged, and last spring (that of 1885), two colonies of this kind were found, both of which are now in winter quarters.

The affected bees appear to be just as well developed as any bees, but they run from the hive generally holding one wing out of place, as if it had been broken or bent out of shape. The bees do not seem to die because of affliction but from exhaustion or the chill of the night. Notwithstanding the great loss of bees from these colonies the queens were so prolific as to build them up to ordinary colonies, one of which gathered about 80 pounds of honey.

In case of these colonies while about one-half of the bees appear as bees generally do, there is the other half that show symptoms as described. I do not mean to say that one-half of the bees, young or old, in these colonies at any and all times are like those described, but one-half of the bees which are of the right age to take their first flight are of this kind, and these, taken the season through, would equal one-half of all the bees hatched.

Though I never have reared a queen or made any increase from such colonies, every spring I find one more colony of this description than there was the fall before.

Bradford, ☌ Iowa.

Read at the Detroit Convention.

The Production of Comb Honey.

G. M. DOOLITTLE, (40-95).

It has been announced that I am to lead in the discussion regarding the production of comb honey. Before doing so I wish to quote the words found on page 723 of the AMERICAN BEE JOURNAL for 1885: "Long articles seldom profit those who have to do with them. Life is short; time is short; moments are precious." Especially is this last true at a bee-convention, and many a person has become tired on account of the long essays read at the same. What we want is animated discussion, rather than long essays, no matter how ably written. Therefore the best part of this essay will be its brevity.

There are four things of importance in the production of comb honey: First, a good queen; second, the getting of the bees at the right time to gather the harvest; third, a skillful apiarist; and fourth, the right kind of a hive.

I put the queen first, for the whole of bee-keeping centres upon her. Without a queen it would be impossible to produce a pound of comb honey; hence it becomes apparent that the better the queen is, the more honey we obtain. When we come to fully realize the great value of *really good queens*, we shall have less queens which cost the apiarist nothing. I wish to leave the impression that good queens cost something, and are valuable in proportion to the pains taken in rearing them.

I put the getting of the bees at the right time to receive the harvest second, for this is paramount to all else in the production of comb honey—except the queen. Unless we can have the bees in our colonies by the tens of thousands at the right time, the flowers will bloom in vain, as far as filling our sections with honey is concerned. When all realize the second proposition, and work for the same to its fullest extent, one-half of the colonies will gather as much surplus as the whole do under our present management.

I place a skillful apiarist third, as he is only second to the bees and queen, and unless he is skillful enough to do things at the right time and in the right place, both bees and flowers will be in vain, as far as getting a good yield of comb honey in sections is concerned. The apiarist must study hard, work early and late, and "leave no stone unturned" that will produce a pound more honey, if he is to be successful in producing comb honey at the present low prices.

I place the right kind of a hive fourth, for this comes last in the category of our subject. To be sure, bees will store honey in a nail-keg, but the day of putting honey upon the market in the shape it must present if taken from such a repository, has passed away, so that if we would realize the most from our bees and our labor, we must get our honey stored in neat and attractive receptacles. The hive that will admit of getting the largest number of bees in the right time for the honey harvest, and then get "all hands" to work in the surplus arrangement as soon as the harvest arrives, is the one to use. We could divide and sub-divide these four headings, especially the last three, yet the above four fundamental principles would not be changed. I therefore leave the subject for your decision.

Borodino, ⊙ N. Y.

E. W. Thompson—Is it profitable to fill sections full of foundation?

J. B. Hall—After many experiments I have decided that it is.

H. R. Boardman—During the past season I hived 100 swarms with no foundation in the brood-nest, excepting starters. I have no data to show whether or not it was a profitable experiment, but I was well pleased with the results. I cut out the new comb from the brood-nest, leave it lying upon the grass until the eggs, if there are any in it, have lost their vitality, then I fasten this new comb in the sections instead of foundation. The honey is beautiful and tender, but will not bear shipment so well.

J. B. Hall—I have tried this plan of hiving swarms without foundation, but I get too much drone-comb.

W. Z. Hutchinson—Are your brood-nests large or small?

J. B. Hall—Large.

W. Z. Hutchinson—That explains it. I hive my swarms upon only 5 Langstroth frames, and not more than one comb in 25 is drone-comb, and this occurs only when the queen is an old one.

H. R. Boardman—I was surprised at the small amount of drone-comb built in my frames. My swarming and hiving were managed upon the Heddon plan.

G. M. Doolittle—Comb foundation gives honey greater strength, but this very strength impairs its eating qualities.

C. F. Muth—There is no necessity of using foundation heavy enough to detract from the palatableness of our comb honey.

The Champlain Valley Bee-Keepers' Association will hold its 12th annual convention at Middlebury, Vt., on Thursday, Jan. 21, 1886. We have received a very neat four-page Programme. Any one interested can get a Programme by addressing the Secretary, Mr. R. H. Holmes, Shoreham, Vt. Premiums are offered for exhibits.

For the American Bee Journal.

A Visit to Dr. Tinker's Apiary.

J. A. BUCHANAN.

As there are no good apiarists within many miles, and being anxious to compare notes, I decided to visit some bee-keeper of prominence. The answers given to questions in the Query Department of the BEE JOURNAL by Dr. G. L. Tinker, being so much in harmony with my views, I decided to visit him and make his acquaintance. I did so last September; and after introducing myself and receiving a pleasant welcome, we were soon "among the hives."

The apiary was a model of neatness; all the hives are new and faultless in construction. As the frames all rest on metal rabbets, they may be removed without irritating the bees. No quilts are used over the brood-frames, which are made of white poplar. The top-bars, I think, are 1 inch wide, and the spaces closed by the use of smooth, square sticks cut from white poplar, which leaves a clean white surface, making the use of the close-fitting honey-board easy.

The Doctor is a machinist, and has excellent machinery for cutting out hives, sections, etc. The beautiful sections made from white poplar are the acme of perfection. The "Improved Victor" is made and used at the Doctor's apiary. Its distinguishing feature is continuous passage-ways; the sections are but 1½ inches wide, and a honey-board made of very thin, strong slats of the same width as the top-bars of the brood-frames and resting directly on the same. Small saw cuts are made in the edges of the slats, forming a honey-board, into which are inserted long strips of perforated zinc. There is no trouble about putting on the cases of sections, as they are pushed to place from the end of the hive, without danger of killing bees; when adjusted there are no bee-spaces, and there is no chance for brace-comb building, and where starters have been put into the sections with care, the combs will be perfectly built. The sections are brought down as close to the brood-frames as possible, leaving no chance for waxing or propolizing the sections; there are no bee-spaces or "loafing-grounds." The queen can see to the top sections, but cannot get up there to lay any eggs.

It may be asked, can more honey be secured by this arrangement than by the use of the zinc honey-board with two bee-spaces intervening? A single experiment made in my apiary last season leads me to doubt. In putting on the zinc honey-boards and section-cases at the beginning of the honey-yield last season, in one hive I put 3 zinc honey-boards; then the case of sections. Did the bees go up into them at all? Oh, yes; they did, and finished them in good style as quickly as any other; and best of all the combs were of snowy whiteness; but much depends upon the strain of bees.

Some years ago there was every possible effort made to bring the sections close to the brood-nest, and the thickness of the tops of the brood-frames was reduced until they were unable to sustain any considerable weight, which soon became crooked and unsightly. However, it was not long until it was discovered that when brought so close to the brood-combs, especially when old and black, there was more or less dark wax used in building the combs, and also greater liability of the queen's entering the surplus receptacles; hence the invention of the zinc honey-board with its break-joint, double-bee-space features. It may be, by using the continuous passage-way system, having the perforated-zinc for the bees to work through, they might stop at the gate long enough to clean off, before entering the parlor; but I am inclined to think that I should prefer to have some more space between the departments.

A word about the Doctor's Syrio-Albino bees: Without smoke or protection of any kind, many of the hives of full colonies and nuclei were opened and inspected without in the least annoying the bees. These bees are beautiful, and the queens are large and prolific. The Doctor's method of securing large queens is by cutting a twig from a young basswood tree and pointing it so as to be able to remove a larva from a well-advanced royal-cell, and in its stead placing a very young larva taken from a worker-cell. He remarked that he had discovered this some time ago, and herein lies his secret of securing perfectly-developed queens. But the plan was not new to me, for 10 or 12 years ago I described the same process in *Gleanings;* but as the Doctor had never seen nor heard of it, the discovery was also original with him.

Holliday's Cove, W. Va.

For the American Bee Journal.

Carbonate of Soda for Bee-Stings, etc.

MRS. DR. E. H. MASON.

The sting of the bee being an acid poison, the antidote for it would be carbonate of soda. The moment one is stung he should put his finger-nail close under the point of the sting, so as not to press on the upper part of the sting, and draw the sting out. Then apply a strong solution of soda to the wound, before it closes by swelling, and if it is a child or a nervous person that is stung, apply the soda several times. If stung very badly, or many times, dissolve a half-tea-spoonful of soda in a little water and drink it.

The above antidote is also good for stings of wasps, yellow-jackets, bumble-bees and hornets; and where persons have over-eaten of honey and are taken with cramps and pain, a half-tea-spoonful of soda and ten drops of peppermint dissolved in a wine-glass of warm water, will give relief at once. It will be found that mostly where bee-stings have given trouble, has been the result of injudicious treatment of incompatible and poisonous applications, or by rubbing and scratching the wound into swelling and inflamation, sores and blood poison, more from the poison of finger-nails than from the stings. In cases where one cannot apply the proper antidote, just pull out the sting and never touch, rub, or think of it, and in time it will get well of itself.

Persons of pure, active blood and steady nerves are but slightly affected by a bee-sting. For myself I would much prefer the clean sting of a bee, to the virus-soiled spear of a Jersey mosquito, which might inoculate one with the poison virus of many sick and diseased bodies, and which is always in waiting for one with its poison-soiled spear; whereas from the bee one gets nothing but clean, pure bee-virus which is a preventive of rheumatism. The bee never stings but the one time, whereas the mosquito can spear all summer.

New York, N. Y.

For the American Bee Journal.

Convenient Chaff Hives.

F. P. STILES.

Notwithstanding the increasing favor shown cellar-wintering, there are many who, for various reasons, will continue to winter their bees on the summer-stands, using chaff hives or packing-boxes for extra winter protection. There is little doubt but that chaff hives would entirely supersede packing-boxes, were it not for the acknowledged inconvenience of performing many of the needful manipulations during the busy season, necessitating either the removal of the brood-frames, or the entire "ark." Time and strength are both too valuable to be needlessly wasted, and as several bee-keepers have expressed themselves as being pleased with my arrangement of chaff hives for summer use, I will describe it.

The brood-chambers of my hives are made without bottom, the ends being ⅞-inch thick and the sides ½-inch. They are 9⅞-inches wide inside, holding 7 Langstroth frames, which, by the way, are as many as can be used in this locality, if the largest amount of comb honey is desired. The stand is sufficiently large to allow a space of 3 inches on all sides of the brood-chamber, and has 2 entrances cut through the floor as long as the hive is wide inside, so that the bees enter the hive from beneath. Two of the four pieces forming the sides of the bottom stand are placed slanting, for alighting-boards leading to the entrances. Upon this stand, resting in rabbets, are two sections and a pitch-roof forming an outer-case, both the sections and roof being rabbeted on all four sides, allowing the use of one or more sections equally well. Thus you see I have a complete double-walled hive, the outer case of which can be removed at pleasure.

This outside case and stand is identical with those used by Mr. A. E.

Manum, with the exception of the double entrance, and known as the Bristol Langstroth hive. The 3-inch space surrounding the brood-chamber is packed for winter, and the entrance is adjusted with slides to suit the ideas of the bee-keeper regarding bottom ventilation.

Now for the summer management: During the spring the back entrance is kept closed, and previous to the swarming season the packing, together with the two sections of the outer-case, are removed, and the roof used for shading. The outer cases may remain, however, if the bee-keeper prefers, but I consider it more handy to have them out of the way. When a colony swarms, the brood-chamber is simply pushed around at right angles to the former position, even with the back of the stand and covering the back entrance only, which is now opened. A new brood-chamber is now placed over the front entrance, in which the swarm is hived. We now have two hives on the same stand placed back to back, each having a separate entrance, one facing south, the other north. After six days this north or old colony is moved to a new stand (Heddon's method), and the other brood-chamber is turned back to its original position, both entrances now opening into it. Thus you see I save all that lifting and "moving a little each day," as described by Mr. Heddon, while to the bees no visible change has been made in the outside appearance.

In forming nuclei, rearing queens, dividing or doubling up colonies, the experienced apiarist will readily see the many advantages possessed by this arrangement. While I believe, as stated in my article on page 709 of the AMERICAN BEE JOURNAL for 1885, that "a small, light hive, designed to be used on the tiering-up principle," and allowing expansion and contraction with little labor, will eventually supersede the cumbersome hives in use at the present time; and also that these little hives will be placed in cellars during winter, yet, for the many who will continue the use of the Langstroth frame and out-door wintering, I offer the above suggestions, hoping they may receive as much comfort from their practical use as I have during the past few years.

Haverhill, ⊙ Mass.

For the American Bee Journal.

Bee-Keeping in Nebraska, etc.

REV. G. T. WILLIS.

I do not think that it will pay to keep very many bees here, as the country is new, and farmers have not given much attention to sowing white clover yet; still, I must have *some* bees, as much real pleasure would be lost without them, and I must have the AMERICAN BEE JOURNAL so I may know what is going on in the apicultural world. I was very much interested in the report of the recent convention held at Detroit, Mich.; in fact, I am always deeply interested in any and everything that pertains to apiculture. Allow me to say a few additional words in regard to Mr. D. S. Given, who was mentioned in that report. I lived within one block of him for several years before he went to California, and learned from him my A B C of apiculture. Any information that I desired or help needed, he was always ready to give freely. I have never known a more kind-hearted, generous man. I knew when he was working to make his foundation press, as he made no secret of it, and I am inclined to think that his close application to the work of getting up his press hastened on the dread disease (consumption), of which he died. A faithful Christian, generous and noble-hearted, with many friends and comparatively no enemies, enthusiastic in the pursuit of Apiculture—his name will go down to posterity as one who did much to advance its interests. He and I were among the first to try the experiment of using fine wire in foundation; and how we almost cried "Eureka!" when we discovered how nicely and perfectly the bees would draw out the foundation over it. I feel pretty sure that this was what suggested to him the idea of constructing the dies so as to make the foundation and press the wires in at the same time; and those who have used his press can testify how well he accomplished his purpose. I think that all who are engaged in the pursuit owe him a lasting debt of gratitude.

Gibbon, ⊙ Neb.

For the American Bee Journal.

Degree where Hibernation begins.

C. P. HEWETT.

After carefully reading Dr. Tinker's article on "The Hibernation of Bees," on page 5, I would say that I have been experimenting for the last 3 seasons to find that point where hibernation begins. In order to do this I built a cellar so arranged with ventilators that I could close or open them to regulate the temperature. I started in with a temperature of 46°, but I found that was high and dropped it to 44°, then to 42°, and there I found the bees quiet and not disturbed easily. I have held the temperature for the last 39 days between 40° and 44°, and I find that there is perfect hibernation. On Jan. 10th the thermometer indicated 18° below zero, and to-day 16° below; the temperature in my bee-house has been 42°.

I give my bees upward ventilation in the hives, but I shall close them down about the first of March to start the bees to breeding. Bees did nothing here last season, and were put into winter quarters in a rather light condition. I have not lost a colony in winter quarters for the last 2 years, but I have wintered bees in a lower temperature than I am doing this winter.

I am now wintering 74 colonies. I keep a thermometer hanging in my bee-house and take notes every morning. I take no pollen from my bees. I like to see them carry it in. I think there are a great many false charges made against it.

Kingston, ⊙ Wis.

For the American Bee Journal.

Rhode Island Bee-Keepers' Society.

The bee-keepers of Rhode Island have organized under the name of "The Rhode Island Bee-Keepers' Society."

The Society's object, as stated by the by-laws, is to advance scientific and practical apiculture, to suppress the production and sale of adulterated honey, and to create a greater demand for pure honey. No person who produces or sells adulterated honey can become a member, and a member found guilty of either, will be expelled and debarred forever from membership.

The officers of the Society are as follows: President, Dr. C. D. Wiggin, of Providence; Vice-President, Geo. C. Greene, East Greenwich; Treasurer, Arthur C. Miller, Barrington; Secretary, Geo. A. Stockwell, Providence; and the Executive Committee consists of the Vice-President, Secretary, and Mr. W. O. Sweet, of West Mansfield, Mass.

GEO. A. STOCKWELL, *Sec.*

For the American Bee Journal.

Honey-Plants of Texas.

W. S. DOUGLASS.

About Feb. 1 the little bees begin bringing in pollen from the elm, then honey from wild-peach, which is very plentiful here, and then comes tame-peach, plum and willow. In March honey is gathered from black-haw, red-haw, etc., all of which yield a good supply. In April we have rattan and persimmon, for the yield of which there are never enough bees. In May elder and horse-mint bloom, and if the weather is suitable the hives will soon be overflowing with beautiful honey. The flow from horse-mint generally continues for 45 or 50 days, provided it rains every 10 or 12 days, as is usually the case here in May.

Wild China yields honey at the same time, and the swamps are covered with it. In June, horse-mint, which generally blooms until the 15th, cotton, wilding or crab-apple, and dog-wood; in July and August we have cotton, dog-fennel, meadow-pine and witch-hazel. In September smart-weed, wild-sage and rag-weed bloom; in October and November wild-sage, privet-bush, and many others yield honey. I have mentioned only the principal ones that yield honey in this locality, and all of these, if the weather is favorable, yield an abundant supply. I would be pleased to hear from others on this subject who live in this State.

Lexington, ⊙ Texas.

For the American Bee Journal.

Organization for Mutual Protection.

W. H. STEWART.

"All are but parts of one stupendous whole,
Whose body Nature is, and God, the soul."

To secure the highest and best good of humanity, "governments are formed among men." Fortunate is he, or she, who is a citizen of this, the grandest and best government ever formed on earth. The union of States and territories is the surety of our National longevity and greatness. These States and territories "are but parts" of the Nation, of which we may well be proud. It is equally true that each of the States and territories are politically, socially, and financially prosperous just in proportion as the citizens therein are united in the support of the highest and best common good.

Again, it is true, that the highest and best good of the individual is found only in the good of all in common. Individuals "are but parts of one stupendous whole,"whose body the Nation is, and good, "the soul." All are aware that the highest and best good of the hand cannot be sustained if it be amputated from the body; and continued dismembering, would destroy the body.

The above are self-evident truths; nations, or societies built upon any other foundation than truth will be "found wanting." Among the "thousand and one" nations that have been organized, none have as yet given general and perfect satisfaction; yet, by and through each organization some truth has been evolved; and when a truth or real good is born, it "comes to stay." Truth and good are principles; principles are immortal—they never change, never die. Errors and evils are changeable conditions, therefore temporary, lasting only for a time; and in the march of human events, they are left behind.

At the formation of our Government, all the good and truths then known and understood, were embodied in our Constitution; and yet many mistakes were made which were to be rectified by coming generations. Individuals, families, and organized societies, are the living fountains from which all political, social and financial good must flow; and as an individual stream from an individual fountain, and running in a lone channel, would soon be dissipated by evaporation, even so are the efforts of lone men lost, and the only hope for strength and success must be based upon organization and union; like the little streams that unitedly form the mighty river.

In animal life there is ever a manifest struggle for life, and in that struggle the fittest survive while the others perish. Many of the lower forms of life were conscious of this truth many ages before Darwin wrote, and led by their instinct or consciousness, organized in flocks, herds, and colonies, as do the "little busy bees," showing conclusively that the index-finger of natural law points in the direction of organization for mutual protection.

This law "lives in all life, extends through all extent,
Spreads undivided, operates unspent."

The division of our Nation into States, gives it strength, not weakness. These States again divided and subdivided into other countless organizations, and all founded on the principle of mutual protection, proves that truth and justice "operates unspent." Recognizing these truths, the many trades and useful industries have organized their several Unions for mutual protection, and all seem to prosper much better than when the several individuals stood (or fell) alone.

With these truths and facts before us, and in full view of surrounding circumstances that threaten to outlaw bee-keeping, is it not surpassingly strange that men who manifest a good degree of wisdom on other subjects, should be so slow to join the National Bee-Keepers' Union? The production of honey adds to the wealth of any nation; it brings one of the most useful and desirable resources of Nature within reach of all, bringing with it health and happiness. We have only to unite, and each become a part of one grand whole (the Union), and we will soon see that our noble pursuit will "spread undivided, and operate unspent;" for "united, we stand; divided, we fall."

Orion, ♀ Wis.

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For the American Bee Journal.

Prizes for Honey and Bees at Fairs.

HINTS TO VICE-PRESIDENTS.

During the first three months of the year, the premium-lists for County, State and District Fairs are usually made up. The Vice-Presidents of the National Society should therefore soon commence their work.

I would respectfully suggest that they communicate with the different Official Boards of the Agricultural Societies in their respective States, and endeavor to induce them to offer appropriate prizes for BEES and HONEY at the Fairs for the coming season.

The following, or something similar to it, would be well to recommend in the line of prizes:

Best colony of bees in observatory hive; best display of comb honey; best display of extracted honey; best display of beeswax; best honey-extractor; bee-hive for all purposes; and largest and best display of apiarian implements.

Each vice-president and secretary of State and local societies will understand the requirements of their locality, and act and govern themselves accordingly.

H. D. CUTTING,
Chairman of Executive Committee.
Clinton, ♀ Mich.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

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Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30

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☞ The Seventeenth Annual Convention of the New York State Bee-Keepers' Association (formerly the Northeastern) will be held in Rochester, N. Y., on Feb. 16, 17 and 18, 1886. This will be one of the largest meetings ever held in the State. A large number of our most experienced bee-masters will take part in the discussions, and several essays will be read from a number of our most practical apiarists throughout the country. The programme is complete. If you are young in the work you can not afford to stay away—if older, you may give some good hints, if you get none. We want a good display of all kinds of supplies and fixtures. We have a room on purpose for exhibits, and any goods sent to the Secretary in care of the "National Hotel," Rochester, N. Y., will be placed on exhibition, and either sold or returned to the exhibitor, as directed. Reduced rates at the hotels have been secured, also rates on some of the railroads. All will have to pay full fare one way—return ticket at 1-3 fare by presenting certificate from the Secretary, who will furnish them on application. We want an active vice-president in every county in State. Please name one or send the name of some one, for your county.

F. C. BENEDICT, SEC.

◆

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, $2.50. Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15.00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Local Convention Directory.

1886. *Time and place of Meeting.*

Jan. 19.—N. W. Ills. & S. W. Wis., at Freeport, Ills.
Jonathan Stewart, Sec., Rock City, Ills.

Jan. 19—21.—Maine, at Skowhegan, Me.
Wm. Hoyt, Sec., Ripley, Me.

Jan. 20, 21.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Jan. 20, 21.—N. E. Ohio & N.W.Pa., at Meadville, Pa.
C. H. Coon, Sec., New Lyme, O.

Jan. 21.—Champlain Valley, at Middlebury, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Jan. 23.—Hancock County, at Findlay, O.
S. H. Bolton, Sec., Stanley, O

Jan. 26—28.—Eastern New York, at Albany, N. Y.
E. W. Philo, Sec., Halfmoon, N. Y.

Feb. 4.—Wisconsin State, at Madison, Wis.
Dr. J. W. Vance, Sec., Madison, Wis.

Feb. 3.—N. E. Michigan, at East Saginaw, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

Feb. 16-18.—New York State, at Rochester, N. Y.
F. C. Benedict, Sec., Perry Centre, N. Y.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Weather in the South, etc.—9—Oscar F. Bledsoe, (75-140) Grenada, ♂ Miss., on Jan. 11, 1886, says:

We are having zero weather here now. The mercury was 4° below zero on the morning of Jan. 9—the coldest weather ever known here in the memory of "the oldest inhabitant." I fear that it has played havoc with the nuclei colonies. I am trying to winter them in order to preserve the fine tested queens. I cleared $400 in cash from my bees last year, besides the increase—a result that I consider good. I am aiming higher this year. May the American Bee Journal be crowned with success and usefulness the present year as in the past; and may the foundations of bee-culture become more firm as a steady, remunerative pursuit!

Bees Doing Well.—S. L. Sherman, Oskaloosa, ♀ Iowa, on Jan. 1, 1886, says:

The past season was rather poor for bees here. There was no fall honey. One year ago I began the winter with 83 colonies of bees, and on May 1, 19 of them were alive, most of them having only a handful of bees. I have increased them to 83, by the nuclei system and natural swarming, and obtained 500 pounds of extracted honey and 200 pounds of comb honey in sections. I now have 60 colonies in a cave, 20 in the cellar, and 3 outside packed in leaves; all appear to be doing well. I use the Langstroth frame. I sold my honey at 12½ and 15 cents per pound.

New Honey-Plant.—Hiram Chapman, Versailles, ♀ N. Y., on Jan. 2, 1886, says:

In the report of the Detroit Convention, under the head of "Pasturage for Bees," I noticed my honey-plant described as resembling plantain. If you would have an opportunity of experimenting with this plant, I will send you some specimens of it which will blossom next summer. Mr. L. C. Root, Prof. McLain, of the United States Apicultural Station at Aurora, Ill., and others, will visit my apiary next summer and thoroughly investigate the plant and its possibilities, and report at the convention to be held at Indianapolis, Ind., next fall.

[We would have no opportunity of testing it here.—Ed.]

Bees in Good Condition.—Arthur E. Ault, North Liberty, ☍ Iowa, on Jan. 9, 1886, writes:

Last winter was the most severe one ever known for bees in this locality. I had 25 colonies packed in chaff on the summer-stands, 13 of which died with diarrhea and spring dwindling, in the spring, and several of the remaining 12 were quite weak. I worked my bees almost entirely for increase, and I now have 37 colonies. White clover was badly winter-killed in this county, and basswood yielded but little honey; however the fall flow of honey was good. Buckwheat, golden-rod, heart's-ease, and the asters yielded exceptionally well. My bees are all packed in chaff, being supplied with natural stores, and seem to be in good condition. They had a partial flight on Christmas. The American Bee Journal grows better and better.

Reversible Hives.—W. Z. Hutchinson, Rogersville, ♂ Mich., on Jan. 9, 1886, says:

I want to say a word about the utility of reversible hives. They will likely be pushed as never before, but pushed upon their real merits—regardless of patent-rights. The experience of one season with reversible hives may not weigh much with some people, but my advice to beginners is, begin with reversible hives. Let me prophesy that when the great "blow"—of opposition—is over, the thousands of ordinary movable frames that are now being pushed into use, will stand—aside for *reversible hives*.

Quietude in the Apiary.—John Reynolds, Clinton, ♀ Me., on Jan. 6, 1886, writes:

Fifty little churches without any steeples, each with pastor and people, music, prayer, sermon, doxology—all combined. The apiary is now at rest, and in contrast with the hum of the "little busy bees" through the hot summer, nothing is now heard from them (nor should be), except a low murmuring sound like the ripple of a distant waterfall as it vibrates upon the frosty air. I have 50 colonies of bees, all well provisioned for their winter's nap. Last season I increased my apiary from 27 colonies to 54, with a total of 2,250 lbs. of surplus honey taken, mostly in 1-lb. boxes, excepting 200 lbs. of extracted. The season of 1884 was a hard one on our bees. I had to feed both the blacks and Italians, and obtained no surplus. We have just had a week of warm weather, the snow being all gone, with southeast wind and some rain. The frost is out of the ground almost enough to plow. What effect, at this date, it will have on the clover roots remains to be seen.

Keeping Bees in a Barn.—Noah Field, Spencer, ♀ N. Y., Jan. 8, 1886, says:

Last spring I bought a colony of bees in a box-hive from a neighbor. It produced one very large swarm. I kept them in a room upstairs in my wagon-barn. Each hive has a slanting bottom-board, and a sliding door that I can raise when I wish to clean out the dead bees. I place the hives 2 feet from the floor and 3 feet apart. I cut openings in the side of the barn just the size of the fronts of the hives, and place the honey-boxes on top of the hives in the room. I got 28 lbs. of honey from the 2 hives. They are in a cellar for the winter, have a plenty of honey stores, and so far they are doing first-rate. I think that the slanting bottom-board is a great benefit, for the bees can take everything so easily downhill to the entrance. I also have a piece of glass in the back of each hive through which I can see the bees pass into and out of the hive. All who have seen where I keep my bees think that it is a nice place.

Home Demand for Honey.—P. J. England, Fancy Prairie, ⊙ Ill., on Jan. 12, 1886, says:

On June 1, 1885, I had 25 4-frame nuclei, which I increased to 27 colonies, and secured 1,500 lbs. of extracted honey, every ounce of which is sold. Of course we can build up a home demand! Use a No. 1 article of honey for bait, and people will be caught.

Bee-Keeping in Texas.—C. M. Davis, Denison City, ♂ Texas, on Jan. 7, 1886, says:

I have kept bees for at least 20 years, and I take a great interest in the business—in fact I find much pleasure in it also. I am in the northern part of Texas, and it is a very poor place for the bee-business, on account of so much drouth. A number of parties that have invested quite largely in bee-keeping, have failed to make it pay here, and consequently have abandoned the business. I have been keeping a few colonies for two years, but with a very small profit, and what I have are very weak in bees, the summer and fall having been so dry that they bred but little. The horse-mint is the principal honey-plant in this locality, and that for the last few years has yielded but little honey. I have kept bees quite profitably in Maine, but I fail to do so here. I am looking for a good location in Florida for bee-keeping, near a city, where I can have an orange orchard and good facilities for transportation.

Blasted Hopes.—Dr. C. C. Miller, Marengo, ♂ Ill., on Jan. 9, 1886, writes:

Isn't it strange that bee-papers publish so many successes and keep quiet about the failures? This thing is all wrong, and you should at once correct it, Mr. Editor, by establishing a corps of 15 or 20 traveling assistant editors to visit every bee-keeper who has not sent in a favorable report, and find out how much of a failure he has made. As I have failed to make a living this year with my bees, and would like to earn something without doing much for it, I will agree to be one of the number, at a salary of $2,500 per annum, you to pay all traveling expenses. I would not, of course, be expected to travel in unpleasant weather. If you accept my liberal offer let me know by return mail.

P.S.—As the snow-drifts are too deep for traveling at present, I should like my time to count from this morning. Will you furnish satchel to carry reports in?

P.P.S.—In case you shouldn't send me or any other traveling man this way after it, here is my report:

No. colonies, Fall 1884.......	300
" " Spring 1885.....	179
" " Fall 1885.......	340
No, ℔s. honey—about........	1,700
Yield per colony.........	9½ ℔s.

[Well, Doctor, we confess that it is a poor report, but perhaps a report for 10 years would show better. Try it. We do not think it would pay us to hire many at the salary you mention. But your "irony" is a stinging rebuke to the chronic fault-finders. We publish just what reports are sent to the Bee Journal, without asking whether they show success or failure. In fact, we very seldom even read them, before passing them over to our clerk to be prepared for "the Press," and all that he does to them, is to try to make them readable and appear creditable in public. "Chronic kickers" are a nuisance, but they exist in every department of life.—Ed.]

Sugar Syrup for Winter Stores.—Miss H. F. Buller, Campbellford, Ont., on Jan. 7, 1886, writes:

I am glad to see that some of our prominent apiarists are calling the attention of their fellow apiarists to the mistaken policy of feeding their bees on sugar syrup for winter stores, to the great and obvious detriment of the honey market. If, as it is stated, honey that has been extracted will granulate in the combs if fed back for winter stores, should any colonies require feeding, as most seasons some will do in every apiary, still that is no reason for feeding sugar alone, as a small proportion of it mixed with the honey will, I believe, prevent granulation, or candying. Last season, when there was so much honey-dew, I fed each colony a few pounds of granulated-sugar syrup, and I think that it was a benefit; at any rate my bees wintered very well. The honey of the past season was of very fine quality, and for what feeding I had to do I used the darkest honey I had, with only a little syrup added, and so far my bees seem to be wintering even better than I ever had them; and though it is a long time till spring, yet I shall be very much surprised, as well as disappointed, if they do not come out all right.

Bees Flying on Christmas.—Dr. H. R. Dorr, (9—14), Worden, ♀ Ills., on Jan. 2, 1886, writes:

One year ago last November I began the winter with 13 good colonies of bees, packed in chaff in double and single walled hives, with plenty of natural stores. I lost 4 colonies in wintering, 3 having starved or frozen to death, as some will have it, and one being queenless I count as lost. I began the season of 1885 with 9 colonies, and increased them to 14, by division. I am now wintering them all on the summer stands, packed with corn-cobs and hay-chaff on the sides, and on top I use corn-silk instead of cushions. The hay-chaff scattered over a layer of cobs fills up the unevenness and packs closely. From the above number of colonies I extracted 900 pounds of honey, a little more than half of it being from clover, and the rest from heart's-ease. I also have about 200 pounds of comb honey in frames, and about 100 one-pound sections partly filled. I sold 25 one-pound sections at 15 cents each. In recapitulating I find that my crop of honey is 1,200 pounds for the year 1885, not counting their winter stores which amount to at least 450 pounds. My bees were flying on Christmas day and cleaning house.

Convention Notices.

☞ The Wisconsin State Bee-Keepers' Association will meet in the State Capitol at Madison, Wis., on Feb. 4, 1886, at 9 a.m. All who are interested in bee-keeping are invited to attend. The meeting will be held during the sessions of the State Agricultural Society, and bee-keepers who are also interested in topics relating to farming will have an opportunity to hear them discussed. Any bee-keeper having anything new in the management of bees are requested to bring it along for exhibition. Persons paying full fare coming, may obtain a return ticket at one-fifth of the regular rate.

J. W. Vance, *Sec.*

☞ The Northeastern Michigan Bee-Keepers' Association will hold its 4th annual meeting on Wednesday, Feb. 3, 1886, in the Common Council Rooms at East Saginaw, Mich. The Sherman House, one block from the place of meeting, will entertain those present, at $1.00 per day. Saginaw people are working hard to make the meeting a success. Let us all go and show them that we appreciate their efforts.

W. Z. Hutchinson, *Sec.*

Honey and Beeswax Market.

Office of the American Bee Journal,
Monday, 10 a. m., Jan. 11, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 6@8c. per lb.

BEESWAX.—24@26c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for honey continues dull, and prices are ruling lower; however, if the cold weather continues, it may improve the trade in a short time. We quote as follows: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9½@11c., and in unglassed 2-lbs., 11@12c. Buckwheat honey in 2-lb. sections, glassed, 9c.; in 1-lb. sections, glassed or unglassed, 10@11c. Extracted—white clover 6½@8c.; buckwheat, 5½@6½c.

BEESWAX.—Prime yellow, 26@28c.

McCaul & Hildreth Bros., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4@8c. a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12@15c. per lb.

BEESWAX.—Good yellow is in good demand, and arrivals are fair, at 20@22c. per lb.

C. F. Muth & Son, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. Kendel, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14@15c.; 2-lbs., 12@13c. Dark fall honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very fine extracted honey this week at 5c., and stocks continue to accumulate.

BEESWAX.—Scarce and higher—22@25c.

Clemons, Cloon & Co., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote comb honey in 1-lb. sections at 14@16c., and 2-lb. sections at 12@14c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

Blake & Ripley, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10@12½c.; amber, 7@8c. Extracted, white liquid, 5¼@5½c.; light amber colored, 4½@4¾c.; amber and candied, 4⅜c.; dark and candied, 4@4¼c.

BEESWAX.—Quotable at 23@25c., wholesale.

O. B. Smith & Co., 423 Front Street.

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Special Notices.

The NEW Heddon Hive.—We have made arrangements with the inventor, by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat. Further announcement will be made hereafter, giving prices, etc.

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☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

"**Don't Stop**"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it*. I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

Agents can sell the Guide and Hand-Book like "hot-cakes." Send us an order for five copies (with $2.50) and we will send you the Weekly BEE JOURNAL *free* for a year. This is a *rare* opportunity to get the Weekly BEE JOURNAL without cost ! !

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

The Guide and Hand-Book, is a book of ready reference and an encyclopædia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 48, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for $1.30

Many Thanks are due to our friends for sending us so many *new* subscribers, when renewing their own subscriptions. The reduced price for 1886 has caused quite "a boom," and is a *popular* move in every sense of that word. As we do not wish any one to work for nothing, we have concluded to offer premiums for *new* subscribers for 1886, for in order to compensate for the reduction of our price to $1.00, we should at least *thribble* our present subscription list.

For 1 *new* subscriber for a year (besides your own renewal) we will *present* you either of the following books—25 cents each.

For 2 *new* subscribers—any 2 of the books.

For 3 *new* subscribers—all 3 of them; *or* the Western World Guide & Hand-book.

For 4 *new* subscribers—Bees and Honey, ($1.)

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A few Binders for the Monthly (two columns on a page) are left. We will mail them for **30 cents** each, to close them out. They are not large enough for either the Weekly or the Monthly of the present size—three columns on a page.

Frank Leslie's Popular Monthly for January, 1886, has articles and illustrations by a host of persons eminent in literature and art, and covers a wide range of subjects. It is essentially the Popular one of our monthlies, suiting the tastes of the many. Christian Reid, the favorite American novelist, contributes a short story, "A Match-making Scheme;" Brander Matthews, the standard dramatic authority, writes of the "Kembles;" Etta W. Pierce, too well-known to need praise, begins a very attractive serial entitled "Daughters of Cain," laying the scenes in cultured Boston and the cattle ranges of the West. Henry R. Dorr, of a family of writers, tells of "Bermuda," tempting readers to visit "storm vexed Bermoothes." Miss Lily Higgin, a favorite with American readers, draws "The Upper Ten Thousand in England." Noel Ruthven tells the story of "Opera in New York;" Vernon Lee gives "Tuscan Notes." W. E. McCann, Mrs. Sarah K. Bolton, and I. V. Crawford supply stories and sketches. Published by Mrs. Frank Leslie, 53, 55 and 57 Park Place, New York city, at 25 cents a number, or $3.00 a year, postpaid.

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Bushel, (bags free) 7.80; ½ bu. 4.00 (bag 23c. extra).
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96 ACRES, hill-land, ½ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.
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Write for circular. No circulars sent this year unless called for. **J. T. WILSON,**
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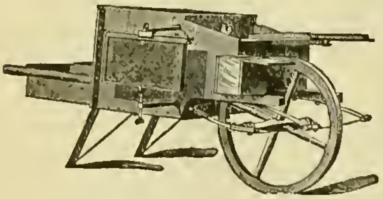

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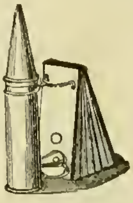

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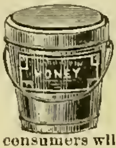

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AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Jan. 27, 1886. No. 4.

Supply Dealers who are now preparing to issue their Catalogues, should be careful to get the prices of Books and Periodicals correctly stated. We notice that several which have already appeared, give wrong prices for Books, and also for the American Bee Journal. It would be better to omit mention of them entirely than to quote them wrongly. It would save trouble and annoyance.

J. W. Powell & Son, says a local paper of Mankato, Minn., report having 195 colonies of bees, which produced 7,000 pounds of honey; of which they shipped 5,000 pounds to Iowa, Dakota, etc. They are among the largest and most successful bee-keepers of the State.

G. B. Lewis & Co., of Watertown, Wis., had an exhibit of sections at the Detroit Convention, but by some "oversight," no notice was taken of them by the committee on exbibits. Of course it was unintentional on the part of the committee. We give this item to repair, in some measure, the omission, and we are sorry Messrs. Lewis & Co. did not mention it soon enough to have a note made of it in the body of the pamphlet.

A Brief History of the North American Bee-Keepers' Society, with a digest of its 15 Annual Conventions, and a full Report of the Proceedings of the 16th Annual Convention held at Detroit, Mich., on Dec. 8 to 10, 1885. This is the title of a new pamphlet of 64 pages just issued at this office. Price, 25 cents.

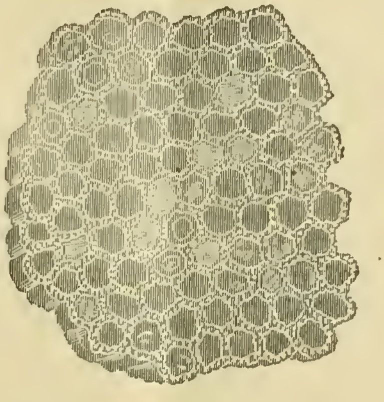
To compile this history and digest of all the past meetings of the Society, has taken much time and labor, and we have no doubt but that it will be duly appreciated by the apiarists of North America.

This pamphlet also contains engravings of the principal honey-plants, and portraits of the Rev. L. L. Langstroth, of Ohio, and Moses Quinby, of New York; two of the pioneers who helped to revolutionize American apiculture, and usher in a new era.

Petrified Honey-Comb.—Mr. John G. Ridenour, of Elida, O., on Dec. 21, 1885, sent us a piece of petrified comb, and remarks as follows concerning it :

> I send you a piece of petrified honey-comb for the American Bee Journal Museum. This petrification of honey-comb was found on the banks of the James river in Montana, by a friend, who said that he knew what it was as soon as he saw it, by its shape and resemblance. He thought he must have a piece for me, as he knew of no one else that had as much curiosity for small things in an apiary as I have. Hold the broken side to the sun and turn it to and from you, and you can see the sparkling diamonds.

It is evidently fossil coral, and not petrified comb. It would be proper to call it honey-comb coral. We have several specimens in our Museum already, and this is added to the number. Prof. Cook, in his Manual, says :



> The animals of which these were once the skeletons, so to speak, are not insects at all, though often called so by men of considerable information.
>
> The species of the genus Favosites first appeared in the Upper Silurian rocks, culminated in the Devonian,and disappeared in the early Carboniferous. No insects appeared till the Devonian age, and no Hymenoptera—bees, wasps, etc.—till after the Carboniferous. So the old-time Favosites reared its limestone columns and helped to build islands and continents untold ages—millions upon millions of years—before any flower bloomed, or any bee sipped the precious nectar. In some specimens of this honey-comb coral, there are to be seen banks of cells, much resembling the paper cells of some of our wasps. This might be called wasp-comb coral, except that both styles were wrought by the self-same animals.

New Price-Lists have been received from the following persons :

J. R. Caldwell & Co., Hoopeston, Ills.—16 pages—Given Foundation Press.

Henry Cripe, North Manchester, Ind—40 pages—Bee-Keepers' Supplies.

M. H. Hunt, Bell Branch, Mich.—8 pages—Bee-Keepers' Supplies, Bees, Queens, etc.

Jos. Nysewander, Des Moines, Iowa—48 pages—Bee-Keepers' Supplies, Bees, Queens, etc. It also contains blank pages ruled for memoranda.

Any one desiring a copy of either of them, can do so by sending a postal card to the address as given above.

When renewing subscriptions please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

The Queen Decides.—Recently the *Louisville Medical News* appeared with an editorial on the "Cause of Sex," assigning it to the male and female, according to their respective emotions, etc. Dr. G. P. Hachenberg, of Austin, Texas, who has one of the most extensive apiaries of the South, took issue with the views advocated in the editorial, and in a communication to the editor, advanced the following peculiar theory :

> It appears to me that we can only pass judgment on such intricate subjects, by reasoning from analogy. To do this, in this case, the male never has anything to do in determining the sex. The male only imparts its own species, and a part of his individuality, and nothing more; and the intricate process of determining sex devolves on the female alone. That either sex may have some of the features of either parent, is no argument against these views. But for proof: The female bee, usually called the queen, has sexual commerce but once in her life, and for years afterwards, in her propagation, she determines the sex through a choice of her own. If the queen-bee is the key to unlock this mystery of animal life, then the physiological evolution that determines the sex, is solely centered in the female. For a wise purpose, the gift of the queen, that is, the potency of her own choice, has been denied to the latter to determine the sex of her gestation, yet still emotional influences on her part are not a foreign necessity. Evidently the local effects of the spermatozoa is an important factor in regulating these emotions; these with local and constitutional conditions, in the aggregate, favor the evolution of sex, either one way or another. I think it well to study the subject from this stand-point.

Appreciation of the American Bee Journal for 1886 is so often expressed by our correspondents, that we could not find room for one in a hundred, but the following are a fair sample of all of them :

J. E. Pond, Jr., Foxboro, Mass., writes : "I am proud of the Journal as an American production. It, if possible, grows better and better : at any rate I am pleased to find that reduction in price is not followed by reduction in labor or falling off in merit."

Chas. H. Wiele, Stoddard, Wis.,writes : "It is but a little money for so many valuable articles, I would not be without it if it had been *raised* in price, instead of being reduced."

W. J. Cullinan, Mt. Sterling, Ills., writes : "I have received the Bee Journal and your book, 'Bees and Honey,' and I consider both invaluable to every one engaged in progressive bee-culture. With the book *I am more than pleased.*"

W. A. Pryal, humorist of the Oakland, Calif., *Express*, is authority for this "funny-dote :"

"London has a regularly incorporated association, the object of which is the protection of the butterfly. The society should also encourage the baking of the buckwheat cake, which, according to the old joke, makes the butter fly."

Now, by all means, let a society be formed for the propagation and consumption of the flap-jack, for it will be the cause of making the honey fly, too. The bee is not the only insect that apiarists take a great interest in, as will be seen by the above.

A Correspondent sends us the following inquiry. As he is a very young man perhaps we may pardon him for this time, if he will promise not to do so any more. It is almost too pun-ny to be funny :

Query—Did not the paper read by Prof. Cook at the Detroit Convention come nearly "putting a head on" (Heddon) the pollen theory ?

QUERIES

WITH

REPLIES by Prominent Apiarists.

Wintering Bees in a Pit.

Query, No. 186.—About Dec. 1 I put my bees into a pit 3 feet deep, and put cloth in the bottom. I placed 1-inch blocks under the corners of the hives, packed corn-fodder between the hives and the sides of the pit, then covered all with dry straw, and over that a cover of boards. Over the boards I put another cover of straw. The bees keep up a continual hum. By letting a thermometer down through a box which connects with the bottom of the pit, I find that the temperature varies from 35° to 45°. Will it do to leave them there for the winter? —J. R., Dec. 24, 1885.

Yes, if it keeps dry in the pit. At any rate do not take them out till a warm day.—DADANT & SON.

I have had no experience in putting bees in pits, but I think that I would leave them just where they are.—H. D. CUTTING.

I should rather the temperature would remain evenly at 45°, but 35° to 45° is as well as I could control my house-cellar in which I have wintered bees successfully. A continual hum is always heard in a cellar containing bees, and if of the right kind, it denotes that they are wintering well. —G. M. DOOLITTLE.

Unless they could be placed in a higher temperature, I would not disturb them; and even if they could, I doubt the advisability of disturbing them, especially if the temperature does not fall lower than 35°.—W. Z. HUTCHINSON.

If you had said that the temperature varied from 40° to 45°, I should say all right. I do not like it as low as 35°. In making a pit, why not make it all under ground and cover it so deeply that you can keep the temperature from 45° to 48°? Do not fear a little gentle hum; it is a note of contentment.—A. J. COOK.

I have had no experience in this kind of wintering, but I should think that the temperature might answer. If the "continual hum" be from a large number of colonies, and resembles the sighing of the wind among pines, I should not be afraid of it; but if it be a continual "zip, zipping," I should feel a little uneasy.—C. C. MILLER.

I do not like your repository at all; however, if I was in your place, I should pile on more straw or earth, or something to raise the temperature about 10°, and keep it more uniform. Bees may become noisy and restless in a high temperature, and no diarrhea result; but if from a low temperature, "look out."—JAMES HEDDON.

The experiment of keeping bees in clamps during the winter months has been tried with more or less success. While I do not think that plan the best, I should advise in this case to leave the bees alone and not disturb them at all, for fear that disturbance would cause great excitement and injure them more than to leave them where they are.—J. E. POND, JR.

"The continual hum" began with the packing, and they keep it up because of the great excitement and disturbance it occasioned. They were aroused from the condition of hibernating sleep which they had entered on Dec. 1, and it will now be doubtful if they will get settled so as to enter it again. I think that they will be as safe where they are as anywhere. Dec. 1 is too late to pack bees in this latitude. They cannot be packed even in October without some disturbance. But the rustling of a lot of corn-stalks in packing would thoroughly arouse them at any time. All operations about the hives in the fall should be conducted as quietly as possible, and all jarring carefully avoided.—G. L. TINKER.

When to Move Bees.

Query, No. 187.—Would it be safe to move my 23 colonies of bees 30 miles in January, on a sled? or would it be better to move them in the spring, on a wagon, after they have had a cleansing flight?—W. G., Wis.

Move them in the spring.—H. D. CUTTING.

The latter way would be my choice. —JAMES HEDDON.

I should prefer the latter method.—C. C. MILLER.

I should prefer to wait until spring. Bees can be moved as safely on a wagon as on a sled.—G. M. DOOLITTLE.

I should wait until spring; still I am not certain that moving them in winter would injure them.—W. Z. HUTCHINSON.

I have known it to be often done with no harm, but theoretically I should prefer to wait till spring.—A. J. COOK.

I cannot speak for your climate, but I used to select a time when snow was on the ground to go into the hills on the Kentucky River to get bees, hauling them on a sled over the roughest road imaginable, without any apparent injury to the bees. They were in boxes and "gums," and were confined by tying a coffee-sack over the open ends of the "gum." This was 25 years ago.—G. W. DEMAREE.

You had better move them in the spring. We tried sleds to our hearts' content. The jarring is not continuous, but very hard when there is any, unless the sleighing is extraordinarily good. Besides, it excites the bees and does them no good.—DADANT & SON.

Wait till spring, by all means. Any disturbance of a nature such as moving them now would create, will inevitably injure them greatly by breaking up their clusters, and causing them to eat disproportionately, or die out in detail.—J. E. POND, JR.

Bees may be safely moved on a sled in January, if extra precaution is taken not to jar them in handling or moving. If it was more convenient for me to move them now than in the spring, I would do it, although the spring is the best time usually to move bees. The moving of bees in winter should be intrusted to no one but an experienced apiarist, one who can handle hives of bees as no one else can.—G. L. TINKER.

Cleansing Foul-Broody Hives.

Query, No. 188.—My bees have the foul brood, and I expect to use phenol at once to cure them. I cured one of the worst cases I had last summer, by using Mr. Doolittle's plan. I would be satisfied with his plan if there was an easy way of disinfecting or purifying the old hives, which I am not able to throw away; I have no kettle large enough to boil a whole hive, and it is a big job to knock a hive to pieces and boil each piece. Is there any way of washing out the old hives with carbolic-acid water so as to purify them? I suppose I have 25 colonies that are affected, but I wish to feed phenol in honey and water to all, so as to cure it throughout my entire apiary of 120 colonies. —Texas.

When you have them cured by the use of phenol, tell us all about it in the BEE JOURNAL.—G. M. DOOLITTLE.

I should think that the farmers living near you keep something to scald their hogs in. Here I could borrow a "hog-box," *i. e.*, a large box with a sheet-iron bottom, so as to be set over a furnace. In such a boiler you could boil two or three hives at a time. Quick-lime added to the water would make it more effective. —G. W. DEMAREE.

You can use a sponge and apply the solution, but be extra careful to saturate every spot. I would prefer a kettle or tank and give them a good boiling. If you are very careful and will do your work well, you can cure it.—H. D. CUTTING.

I have never seen a case of foul brood, but if phenol is effectual, why not paint the hives with a solution?—C. C. MILLER.

I cannot say, but why not try washing the hives well with either carbolic acid or salicylic acid dissolved in alcohol? I presume this would disinfect the hives.—A. J. COOK.

We are no authority on this, having never seen a case of foul brood. Several French apiarists claim to have cured foul brood by smoking the bees and hives with dried thyme.—DADANT & SON.

It seems to me that it would cost less to procure a kettle or pan that would hold a part of a hive at a time, than to use as much carbolic acid as would be needed. A pan two feet square and 4 inches deep, would scald every part of my hive by turning the parts.—JAMES HEDDON.

The plan detailed by Mr. Frank Cheshire gives a complete history of the phenol cure. Phenol is simply pure carbolic acid, and if it will cure the disease, it will, I should judge, effectually cleanse an infected hive, if thoroughly applied to *every* part.—J. E. Pond, Jr.

I think that it would be useless to wash out the hives with carbolic-acid water, at least with a 5 per cent. solution. A good atomizer, like the little "Gem," I should think would be effectual in cleansing hives used with a mixture of equal parts of phenol and alcohol. I have used so strong a mixture in the sick-room, but it is a little too pungent. In my practice I have found one part each of carbolic acid, alcohol and water used with the atomizer to be highly effectual in the sick-room in destroying the contagion of typhoid fever, scarlet fever, and diphtheria. My experience has led me to think that if the mixture were used in school-rooms in localities where epidemics of the two latter diseases prevail, there would be no need of closing schools, and the epidemics would soon abate. Perhaps the same strength of mixture would be strong enough to cleanse hives of the germs of foul brood.—G. L. Tinker.

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CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⌐○ northwest; ○⌐ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Comb Honey vs. Extracted Honey.

17—G. M. DOOLITTLE, (40—95).

On page 759 of the American Bee Journal for 1885, under the above heading, Chas. Dadant & Son, by an overhauling of my report on page 709 of the same volume, endeavor to prove that Doolittle was not correct in his estimate, that with extracted honey at 8 cents per pound, comb honey could be produced at 12 cents per pound, with equal profit to the apiarist. Messrs. Dadant & Son should be credited with great tact and skill, for certainly such is shown in their weaving the many minor points in my report into their fabric in such a way as to point toward their 20 cents per pound for comb honey, instead of 12 cents as I put it.

Well, I am very glad that they gave us that article, for it gives me a chance to explain farther regarding that report, than I otherwise should have done, and in doing so I will leave them as near the 20 cents per pound for their comb honey as I possibly can and keep truth on my side.

In my report found on page 709, which helped them to draw their conclusions, I gave the number of colonies of bees that I had to start with in the spring, as 40. Twenty of these were good to fair, 10 rather weak, and 10 very weak. Of these, 25 were set apart for comb honey, 2 for extracted, and 13 (the very weakest) for queen-rearing; hence I had 20 good to fair colonies and 7 weak ones producing honey, 5 of the weak ones being worked for comb honey, and 2 for extracted. Without farther explanation all would expect that the 20 good colonies gave more of the comb honey in proportion to their number, than did the weak ones, while the facts in the case are that 2 out of the 5 weak colonies worked for comb honey gave more than the average yield, one giving 139 pounds and the other 128 pounds. The reason for this is as follows:

After I had set apart only the 13 weak colonies for queen-rearing, orders began to pour in for queens to such an extent that I saw that I would be "swamped" if I did not make some provision for more nuclei than I could possibly make from those 13 weak colonies. Accordingly I began to draw bees from all of the strongest colonies, and used them for nuclei upon the plan I gave last June, taking the brood that they were hived upon from these strong colonies also. These nuclei were built up as fast as possible by giving them a frame of brood occasionally from these strong colonies, so that they constituted the larger part of my increase, as will be seen when I say that in no case was there allowed but one swarm from any of the 25 colonies, and two of them did not swarm at all. Thus we have 23 new colonies from the 25 old ones set apart for comb honey, making 48. Then we have the 13 weak colonies built up to good colonies, and the two set apart for extracted honey, making 63, while the next 32, to make the 95 reported, were made of nuclei built up, and others which were doubled up in the fall.

From the above Messrs. Dadant & Son will see wherein their last paragraph on page 760 of the American Bee Journal for 1885, has no bearing on the subject. One other item I wish to explain right here. In that paragraph they speak as though they thought that the queens that were used to produce the comb honey were crowded for room. This is a mistake, for such queens were not crowded until after the bees were produced which gather the crop. Here is where they touch on one of Doolittle's hobbies. Nearly all of those queens had 15 Gallup frames which they filled with brood and bees, so that when swarms issued they were not the little swarms that Messrs. Dadant & Son speak of as coming from an 8-frame Langstroth hive, but they were rousing large swarms, only they came a little late in the season, owing to the treatment given the strong colonies which I have spoken of above.

Now comes in the crowding part. When these large swarms were hived they were given only 5 and 6 frames in the brood-chamber, while all the rest of the hive was filled with sections. In this I believe we have one of the greatest secrets toward the successful production of comb honey. Get all the bees you can before the honey harvest, by giving abundant room for the laying-capacity of the queen, and after the honey harvest arrives contract the brood-apartment of all hives, so as to throw the larger part of this force of bees into the sections.

Again, they speak of the 2 colonies worked for extracted honey producing 388 pounds, which is correct; but unfortunately for their 20 cent-per-pound theory, I found when preparing the bees for winter, that these 2 colonies had used up nearly all the honey in brood-rearing that I had left in their hives when taking away the 200 pounds from them, so I had to give them 50 pounds of the removed 200 to insure their wintering; thus reducing the 388 pounds to 338 pounds. Then the 188 pounds of this 338, which was taked with the extractor, was taken before it was sealed over, or in an unripe state, as I wished it for a particular use, and did not care to have it stay in the hive until it was ripened, as I always insist in having it when it is for market. This would make a reduction of the amount, or of the value (one being equivalent to the other), but I will only call this part to offset the one cent per pound that they give as the value of the washing of the cappings for vinegar. As their was no cappings, of course I could not wash them. When I do have them I never wash them, for the low price of cider-vinegar in this locality, together with the cost of the barrel, makes it unprofitable to do so, especially as we can with a solar wax-extractor entirely separate the honey from the wax or cappings.

Another thing: I am not ready to admit that it takes any less labor or capital, all things considered, to run an apiary of a given size for extracted honey, than it does for comb honey; and I have been carefully experimenting on this point for the past 12 years, producing some of each kind of honey nearly every year during that time. When Messrs. Dadant & Son produce comb honey in sufficient quantities, and become expert so that they can remove all the surplus honey from 90 colonies in 3 hours, as does Mr. A. E. Manum and others here at the East, they will speak less of the extra work required in producing comb honey. So, then, if we call the labor equal in producing both kinds of honey, and offset the 2 colonies producing the 338 pounds of extracted honey with the 2 weak ones worked for comb honey which gave 270 pounds, we shall have about this result: Each colony worked for extracted honey produced 169 pounds, which, at 8 cents per pound, amounts to $13.52. This divided by 135 pounds (the amount of comb honey given by each of the two weak colonies), gives about 10 cents as the comparative cost of comb honey, which is the estimate given by Mr. Pond in answer to Query, No. 153. If we divide the $13.52 by the 119 pounds of comb honey given on an average throughout the apiary, we shall have about 11½ cents as the comparative cost of comb honey, which is about what I gave in my answer to Query, No. 153. Now, if we count the increase given by the 2 colonies worked for comb honey (which was two fine swarms) against no increase from the other, there will be but little difference in the comparative price per pound between the two.

However, I will not multiply words, but simply say that after 12 years of careful experiment regarding the production of both comb and extracted honey, I find that when thoroughly ripened by the plans given by Messrs. Dadant & Son, I get, on an average, one-half more extracted honey than I do comb honey, with about an equal expenditure of capital and labor on each. For this reason I answered Query, No. 153 as I did, and I am still of the opinion that the answer "8 cents and 12 cents per pound" as the relative cost of producing extracted and comb honey, is nearly, if not quite, correct.

Borodino,⊙ N. Y.

The Century.

The Night is Still.

EDITH M. THOMAS.

The night is still, the moon looks kind,
The dew hangs jewels in the heath,
An ivy climbs across thy blind
And throws a light and misty wreath.

The dew hangs jewels in the heath,
Buds bloom for which *the bee* has pined;
I haste along, I quicker breathe,
The night is still, the moon looks kind.

Buds bloom for which *the bee* has pined,
The primrose slips its jealous sheath,
As up the flower-watched path I wind
And come thy window ledge beneath.

The primrose slips its jealous sheath—
Then open wide that churlish blind,
And kiss me through the ivy wreath!
The night is still, the moon looks kind.

For the American Bee Journal.

Infallible Queen-Introduction.

JOHN HEWITT.

So much has been said and written on queen-introduction, "safe," "direct," and otherwise, that the subject would seem to have been thoroughly exhausted; and still successful introduction of queens is only looked upon as "luck" work, if I may judge by the remarks of Mr. James Heddon on page 732 of the AMERICAN BEE JOURNAL for 1885, and others.

The greatest amount of harm has been done by bee-keepers making hasty assertions formed on some observation which they did not comprehend, and these statements repeated time after time until they are accepted as truth. For instance, how many times are we told that old, queenless bees will not accept a step-mother? and yet to such, no matter how old or how long they may have been queenless, I can introduce fertile queens as quickly as I can drop them at the entrances of the hives containing such bees. Could anything be more simple or easy?

It is well known amongst bee-keepers, that bees will not accept another queen while their own is in the hive, nor as laid down by Huber, for 24 hours after her removal; I have observed, which I believe has never been noticed by any one else, that when bees have started queen-cells, they look upon them as their own queen, and will not accept an alien, particularly while they are *unsealed*, and this is the "rock" where so many are lost.

Huber says that bees will accept a strange queen and treat her as their own if she is presented to them at the end of 24 hours; this system is practically like the one of Mr. J. E. Pond, Jr., and if the new queen is caged at the time of removal of the old one and not kept caged longer than 30 or less than 24 hours, no failure will ever occur. I make this as a positive assertion, providing the releasing is done between 24 and 30 hours after removal of the old queens; after 30 hours queen-cells will be started, then all the "difficulties" begin. If every queen-cell is cut out, when the bees miss them, and before they start fresh ones, they will at this point accept the queen; but not when cells are started again. The older the bees are, the more eager are they to begin fresh cells, hence the saying, "Old bees will not accept an alien queen." So anxious are old bees to rear another queen, that if one is caged in a queenless, unsealed and broodless hive, they will carry eggs dropped by the caged queen and rear queens from them. Those scientists who doubt that bees can steal or carry eggs to rear queens from, had better try this experiment, when I venture to think their stock of knowledge will be increased. But with bees in this state it is almost impossible to get the strange queen accepted; I have tried on one case for 16 days.

Some years ago, when thinking over the question of queen-introduction, I reasoned thus: "When bees are queenless and have no means of rearing another queen (say their own was a virgin and lost on her wedding-trip), has Nature, in her great economical laws, ordained that their generation shall die off and not save themselves by accepting a strange queen which might come to them, say one lost in taking her bridal trip?" The more I thought of this, the more unnatural and repugnant to all her other laws, it seemed to me; so, as I had a stock at the time, which had been queenless two months, I decided to try the experiment. Robbing was rife at the time in the neighborhood, and when I dropped a fertile queen amongst them, the "guards" pounced on her as a robber; but oh, my, their astonishment! they immediately set up a peculiar hum and formed a half-circle round her, and conducted her into the hive, when she commenced laying. I have repeated the experiment so often with all kinds of queens, useing imported ones of priceless value, without a single failure, that I may be pardoned for saying that this system of mine is "infallible." The "Law" to bear in mind is this: "*The bees must have been queenless at least* 30 *hours, and have no means to rear another.*" This law holds good even if laying workers are present, unless they have begun laying, so that the bees of any hive found to be queenless, will accept another without any caging; so also one in which all the queen-cells are cut out on the 9th day, or one where a virgin queen was lost on her bridal trip. The knowledge of this law also enables me to prove in a few seconds whether a hive is queenless or not, without having to hunt up the queen; for, if queenless, they will accept a queen with a joyful hum; if not, they will "ball" her.

I find this system invaluable in the fall, for it very often happens that we want to replace old queens with young ones, or we may have our most valuable queens in colonies that we would rather they did not pass the winter in, and would like to exchange them with others. Now with this system, all we have to do is to take the queen from the other stock, cage her in a mailing cage, where she will be safe for a week or so; in two days I catch my most valuable queen and drop her at the entrance of the hive from which the other was removed, providing the weather is warm; if it is cold, I drop her in under the quilt, amongst the bees. In two more days I take the one from the mailing-cage and give her in the same way to the other hive. Of course care is required that neither of the hives contain brood or eggs, which can be noted when removing the queens, which is not probable in the fall; but if they do, the combs containing the brood or eggs must be given to other hives in exchange for brood or eggless ones.

My first publication of this system is in the *British Bee Journal* for July 1, 1883, page 83; but bee-keepers do not seem to have "grasped" the value of the idea yet; or perhaps I explained it too *briefly* for any one to comprehend it. An ex-pupil of Mr. D. A. Jones, of Beeton, Ont., paid me a visit last fall, to see bees migrated to the heather and returned, to whom I showed its practical workings; old queens were removed, and any time when convenient after 2 days, young ones were allowed to run in at the entrance or dropped in under the quilts, and others exchanged. He expressed his astonishment and delight with the process, which he said "licked" all the plans of queen-introduction that he had seen or heard of in the New World. I call it "Hewitt's Direct System" of queen-introduction—direct because the queen alone is given direct and at once, without any caging; and strictly speaking, it is the *only* direct system extant. Reaumur's and Huber's are direct in a degree, while Simmins' is not direct in the least, as a comb of brood and honey covered with bees has to be given as well; while the plan is not even new, having long been used in this country.

The first system of queen-introduction was given by Reaumur 100 years ago, his plan being to confine the bees in a box and then after awhile give them the strange queen; almost exactly as Mr. Doolittle does in making and uniting nuclei. Huber, under date of Aug. 30, 1791, criticises this plan, and while he admits its truths he maintains that the bees are not in a natural condition. Just so! the bees are lost, with no queen or means of rearing one, hence they will *infallibly* accept another after 24 hours; which I am sure Mr. Doolittle will have found to be so. Thus it will be seen that Reaumur's plan is my system in embryo; but by the law I give, it can be varied to suit all conditions and circumstances.

It will be seen that we have *three* infallible ways of safely introducing *fertile* queens, (I do not in the slightest way allude in this article to introducing *virgin* queens), and if any failure results it will be on account of not keeping to the rules. For instance: Some direct caging queens 3 days or more; with such advice the wonder is that any are accepted—certainly none will be with old bees; if only young ones are in the hive, then queen-cells are not usually started for 5 days, when it will act; hence the advice to move the stock to a fresh stand, to draw off the old bees, under the belief that they alone are dangerous; while as a matter of fact the old bees, if caught on broodless comb and kept queenless, will after 30 hours invariably accept any fertile queen at once, if given uncaged, when brood can afterwards be added if wanted.

I am not making this public in haste, as I have for years been testing this great natural law that I have discovered; those who are inclined to doubt its truth, should notice the commotion and noise at the entrance of a stock of bees that are queenless, and having no means to rear another, which noise and commotion I believe is made to attract a strange queen to them. Anyhow, I have had 2 colonies re-queen themselves so, and a friend of mine had one also. Every bee-keeper should note the peculiar hum they make when a fertile queen is given them; it is something like the swarming-hum, so near as I can discribe it, but still it is distinct in its peculiarity; however, every bee seems to know that a "mother has come," and begins "clapping" its wings for joy, or it may be to welcome her; whatever it is, in my opinion it is the most poetical phase of the natural history of bees, and I want every bee-keeper to test it for himself.

Now, readers, you all at some time or another want to change your queens; so carefully study this article and you will find it worth all you have ever paid or are likely to pay for the AMERICAN BEE JOURNAL. If anything is not sufficiently clear, I will try and make it so. Tell all, next winter, how you like it.

Sheffield, England.

[By request of Mr. Hewitt, we have printed the word "stock" for "colony," where he had so written it. We prefer the word colony, but defer to the wishes of our correspondents when they express a *decided* preference, as does Mr. Hewitt; lest we should Newman-ize it, as one correspondent expressed it, when mentioning our changing of his verbiage in this respect. Having adopted a nomenclature of terms in bee-keeping, should we not always try to be consistent therewith? When a departure is made from that, we make a note of it.—ED.]

☞ The Wisconsin State Bee-Keepers' Association will meet in the State Capitol at Madison, Wis., on Feb. 4, 1886, at 9 a.m. All who are interested in bee-keeping are invited to attend. The meeting will be held during the sessions of the State Agricultural Society, and bee-keepers who are also interested in topics relating to farming will have an opportunity to hear them discussed. Any bee-keeper having anything new in the management of bees are requested to bring it along for exhibition. Persons paying full fare coming, may obtain a return ticket at one-fifth of the regular rate.

J. W. VANCE, *Sec.*

For the American Bee Journal.

The Hibernation of Bees.

WM. F. CLARKE.

Editor American Bee Journal:

The accompanying article will appear in the February number of the *Rural Canadian.* Will you kindly make room for it in an early number of the AMERICAN BEE JOURNAL, and permit me to say that a multitude of claims and calls forbids my noticing the matter just now in a shape more suitable for your columns? By so doing, you will greatly oblige,

WM. F. CLARKE.

Guelph, Ont., Jan. 19, 1886.

The able and unanswerable article of Dr. Tinker on the hibernation of bees cannot but produce a profound sensation among intelligent bee-keepers. In a private letter, which I take the liberty of quoting, the Doctor says: "You will notice that I do not make use of the word 'quiet,' or 'quietude,' because I think the condition the bees pass into implies something more than is expressed by those terms. I shall be pleased, if, after reading my article, you would put in a disclaimer that you are not satisfied with that word to express the actual condition. In my opinion *only the word hibernation* is applicable."

Many a time and often since this controversy began (about 18 months ago), I have felt like making a clean sweep of "quiet," "quietude," "quiescence," "torpor," "semi-hibernation," and all other words having any ambiguity about them. From the first I have felt as Galileo did about the true theory of the solar system, but, without access to a scientific library, and with the most meagre opportunities for experimenting, modesty forbade assertiveness. The only man in the bee-keeping fraternity who made any pretensions to scientific acquaintance with entomology, treated the whole affair with contemptuous dogmatism, and would not even investigate the theory. I broached it with the simple and reasonable request that bee-keepers would experiment in regard to it. So far as I know, Dr. Tinker is the first who has done this with any thoroughness, and it has been wholly of his own accord. The result is, complete demonstration of the correctness of my position. *There are more to follow.* "They are coming, Father Abraham, 300,000 strong!"

I have no hesitation in accepting Dr. Tinker's article in its entirety, with the exception of what he says as to "the weight of the argument being against the chaff hive," and I merely "ask leave" to let that point rest in abeyance until next spring discloses the result of experiments now being made. Meantime, our best thanks are due and are hereby presented to the worthy Doctor, and the disclaimer he suggests is gladly made. Henceforth, "HIBERNATION" is the word, and none other, that we accept, for, in truth, it is the only term known to science, which is applicable to the case.

Pacific Rural Press.

Skunks in the Apiary.

WM. MUTH-RASMUSSEN.

The skunk is one of the recognized enemies of bees, and, like most of them, is nocturnal in its habits. The first indication that the bee-keeper has of the visits of a skunk is, that the front of the hive and the entrance-board is blackened as if smeared over with mud, which had afterwards been carelessly wiped off. This is done by the skunk's scratching on the hive with its paws to incite the bees to come out. As it is not strong enough to knock the hive over, like a bear, and get at the honey itself, it is content to eat the bees for the sake of the honey they may contain, although I doubt not that it frequently swallows a highly seasoned morsel.

On closer examination, a hole will generally be found scooped out in the ground in front of the hive, and more or less dead and dying bees, sometimes as much as a handful will be found lying in the hole. It has been said that the skunk manages to get the bees entangled in the hairs of its large bushy tail, and slashing it around in the hole kills or cripples the bees before it proceeds to eat them. As it always leaves a number of bees, many of them still kicking, in the hole, it may be surmised that either it does not take much to satisfy the skunk, or else, getting more stings than honey, it leaves in disgust before it has had enough. However, if a skunk is allowed to visit the same hive several times in succession, it is obvious that it will not take it long to seriously depopulate the colony, more so as its visits are most frequent during the winter, when the bees are not breeding.

A large dog will easily kill a skunk, and some dogs take naturally to that kind of game, while others are loth to tackle a skunk after they once have gotten a dose of its perfume. Skunks may be shot on moonlight nights if the bee-keeper watches for them, but in either case they are apt to leave their scent, which will adhere to the locality for a number of days. The better way is to trap them in a common box-trap with a sliding-door.

The trap may be baited with a piece of old, tough comb or a rag smeared over with thick honey, or with a piece of fresh meat tied securely to the trigger. It should also have a small opening in the top, closed with a shutter, through which it may be seen if it is a skunk, or a cat, or other animal, which is in the trap. If a skunk is caught, carry the trap to a pond or a large, water-tight box; immerse the trap and weight it down with a heavy stone, so that it will be filled and thoroughly covered by the water. If the trap is handled carefully, without shaking or frightening the skunk, it will, as a general thing, not smell. In 10 or 15 minutes the trap may be taken out of the water and the skunk buried deep enough to prevent dogs or coyotes from unearthing it again.

As soon as the trap has been dried out, so that the door works easily, it should be set again, and works apparently better the oftener a skunk is caught in it, as the scent seems to be rather an attraction to others of the same tribe. To prevent the skunk from lifting the door and escaping, a cleat should be nailed across the bottom of the trap, just inside the lower edge of the door. If this cleat is not there, or some other device to hold the door down, the skunk can easily raise it with its long claws.

Independence, o+California.

For the American Bee Journal.

Small Hives vs. Large Hives.

D. A. FULLER. (80.)

I think that I can best answer Mr. Dayton, page 25, in his reference to my letter on page 762 of the AMERICAN BEE JOURNAL for 1885, by giving a little of my experience in my own apiary. I must acknowledge that as late as the spring of 1883 I was very much in favor of the 8-frame hive. I commenced that spring with part of my bees in 8-frame hives and part of them in the 10-frame ones. That year I commenced using the Heddon super and tiering-up system for comb honey. I found that I was getting but 28 sections on an 8-frame hive, and the 10-frame hives took 32 sections, 4¼x4¼x13-16 inches. This made 4 lbs. more for the 10-frame hive, and I tiered them up 4 high; none of the 8-frame hives were tiered up any higher, and a few of the 10-frame hives were 5 tiers high. But allowing them to have been tiered up the same, I had 4 more sections to the tier on the 10-frame hives than on the 8-frame ones, which made 16 lbs. more honey in favor of the 10-frame hives.

The foregoing was my experience for 1883; in the season I used but 3 8-frame hives, still determined to give them a fair trial; but the result was the same, and those other 3 8-frame hives were condemned to the wood-pile. It has often been said that the strongest argument a man can use is one that reaches his pocket, and this did reach mine, to the amount of $2 per hive, if I compute the 16 lbs. of honey at 12½ cts. per pound, which is a low estimate. Location certainly made no difference with my experiments as the hives stood side by side.

While tiering-up is not an entire preventive of swarming, if it is closely and carefully attended to the apiarist will not be troubled with many swarms; and if Mr. Dayton could see the swarms that do issue when a colony in a tiered-up hive does swarm, he would conclude that I did not need to compare a third or fourth swarm with an average one. In my plan of working by tiering-up, third and fourth swarms are a rarity.

Some springs I do find it necessary to feed some colonies in wet or cold spells in order to build them up to good, strong colonies by the commencement of the white clover season. My colonies do average more than 8-frames of brood, and quite often fully 10-frames, at the beginning of white clover bloom; and my experience has taught me that a large (average) hive is better than a small (average) hive.

Cherry Valley, ♁Ill.

For the American Bee Journal.

Reversing the Frames.

J. E. POND, JR.

When the matter of reversing frames was first presented, I looked the idea over and experimented somewhat in that direction, and as I had previously met with some degree of success in reversing sections to cause the corners to be filled out, I became quite enthusiastic on the subject, and gave the opinion that they would be or should be universally adopted. A single season with them taught me that I was wrong, and that the benefits claimed by their use was not in accordance with natural law, and could be far more easily attained without the trouble and expense of fitting over frames, as would be necessary in order to adopt the plan.

Chief among the benefits caused by the method of reversing, is the getting of brood in the tops of the frames; not that I pass over that of getting frames filled out in the corners, for by use of full sheets of foundation no trouble of that kind need arise. It is, I suppose, as well known to others as to myself, that the queen will not use store-combs in which to lay her eggs, but will use only such cells as are of the regulation depth. Reasoning from this premise, and on the further ground that the attempt is always made to put honey above the brood, I decided that any plan that would keep the upper part of the comb at just the correct width, viz., ⅞ of an inch, would at once cause the cells to be filled with eggs; and as a matter of course, the stores to be deposited in the sections above.

The question then arose, how can this best be done? Shaving off the combs I found to be too much labor, but upon testing the idea of putting the frames nearer together, I found the plan was a success. If the combs are placed just so near together as to leave a bee-space between them, and allow the whole comb to be ⅞ of an inch wide, no trouble will be found in keeping the upper rows of cells filled with eggs, if sections are in place; and if the new top-bar of Mr. G. W. Demaree is used, no brace-combs will be needed at all, while the bees will be found to occupy the sections whenever there is any honey to be gathered and stored.

Perhaps my own experience may not be that of others; however, I would advise that a test be made in different localities, in order that the matter may be fully determined; for if it works elsewhere as with myself, time and labor will be saved, and the production of comb honey greatly simplified.

Foxboro, o+Mass.

For the American Bee Journal.

Pollen and Bees---Misrepresentation.

W. ADDENBROOKE.

I fully endorse the article by G. M. Doolittle, on page 6, on "Pollen carried from flower to flower." Most of the readers of the American Bee Journal are aware that in England, melons, cucumbers, pumpkins and squashes cannot be raised in the open air; they are all raised in green-houses and hot-bed frames, and many hours have I worked in the garden at home in England, with a fine, long camel's-hair brush, conveying the pollen from blossom to blossom where the bees could not get to do the work; and even now in this climate, if we do not have good weather for the bees to work on the fruit bloom, and especially on red clover saved for seed, we get but a poor crop. Last year I had a good crop of mammoth clover (pea-vine) seed, while a few miles from here there was none, and I think that I owe it to my colonies of Italian bees, for they worked on it first-rate.

I think that if people would only open their eyes, and study "Nature's laws," there would be no need to fight lawsuits caused by spite or ignorance.

I was pleased to see the stand that you have taken in the Bee Journal, on page 19, concerning "more misrepresentations about comb honey." I think that the bee-keepers of the country are greatly interested in causing a stop to be put to all such misrepresentations, and should spare no expense to put to shame such false articles as are now published.

North Prairie, Wis.

For the American Bee Journal.

Upward Ventilation in Wintering.

5—J. M. GOODRICH, (62—120).

Having read Dr. G. L. Tinker's able article on the hibernation of bees, page 5, and having found much in it that is instructive, and which I can endorse, especially the temperature of bee-cellars, yet I must take exception to the remark that, "Somehow I am becoming impressed with the idea that a great part of our wintering troubles comes from upward ventilation in hives." My experience in this climate where bees must stay in the cellar about four months of the year, has led me to just the opposite conclusion after an experience of five years in cellar-wintering.

I cannot keep bees in a cellar here for any length of time without upward ventilation, as they will become so damp that the water will run out of the hive-entrances, and the combs will become so wet that the bees will become diseased and die. Almost every year, until this year, I have put into the cellar some colonies, from some cause either small colonies or covered with quilts (I use board-covers), without upward ventilation, and in every case water was sure to run out of the hive in a short time; while other hives by the side of them, with upward ventilation, were all right.

In the fall of 1884 I had quite a number of very small colonies—so small that they ought to have been doubled up, but I was very busy and was not aware of their condition until it was too late to unite them; thinking that they were so small that they would not need upward ventilation, I put them (16 in number) into the cellar without moving the covers forward one-quarter of an inch, as in my practice for upward ventilation; the result was that every colony had water running out of its hive in a short time; and when the covers were moved forward, the water stopped coming out of the hive in less than 24 hours, which I find to be the result every time.

My conclusions are that the cellar wants but little ventilation, and outside air let into the cellar when there is much difference in the temperature, is sure to arouse the bees and do harm. But keep the entrances open, with reasonable upward ventilation so that the moisture will not accumulate in the hive, and the bees will be all right.

Concerning the temperature of cellars: My bees will be quiet at from 40° to 43° above zero, but above that point they are uneasy, and get worse as the temperature is raised.

South Frankfort, Mich.

For the American Bee Journal.

Bees on the Great American Desert.

D. M. IMLAY.

A few years ago people said that "bees won't do any good in this country." Well, I did not dispute it, for I did not know anything about it; but some soon began to try keeping a few bees, and this "Desert" will soon begin to export honey instead of importing it. In 1881 I obtained a colony of bees in a Langstroth hive (luckily), and subscribed for the *Kansas Bee-Keeper*, and afterward for the Bee Journal. Then I went to school two years and did not do much with bees except to get stung and bedaubed with honey; but I will submit my reports, which are as follows:

In 1881 I increased my apiary from 1 to 2 colonies, and got no honey; in 1882 I increased it from 2 to 4 colonies, and secured 100 pounds of honey. I lost one colony in the spring; I think that it was queenless, but I did not know it then. In 1883 I increased my apiary from 3 to 11 colonies, and I lost 4 colonies and bought 8. In 1884 I began with 15 colonies, increased them to 39, and secured 800 pounds of honey. I lost 8 colonies and bought 1, and 2 1-frame nuclei. In 1885 I began with 34 colonies (nominally), increased them to 70, and obtained 1,800 pounds of extracted honey, and 500 pounds of comb honey. With my present experience, and with the bees in about 50 hives, I could have gotten nearly double that amount. The colonies were very weak in the spring to begin with, and they got scarcely any honey until the middle of June, and then only enough to keep up brood-rearing until about the middle of July. After that they got no more until about the middle of August, when they began on buckwheat, and from that to heart's-ease; from these two plants we get our surplus crop. I had only 3 or 4 colonies ready at the right time to take advantage of the flow, but all of these gave over 100 pounds each.

A neighbor had 10 colonies in the spring, increased them to 25, and took 2,500 pounds of honey. He said that he could have taken 1,000 pounds more, had he been at home. It was extracted before being capped, and as I handled some of it, I can say that with the mercury at 50° Fahr., I could take up 2 pounds of it on a large spoon. I would like to ask Mr. Doolittle if such honey should be left on the hive until capped before extracting. The honey was put in screw-top cans as soon as extracted.

I sell all of my honey in the home market, by using pails, and by the means of a sign on my shop. At a very little expense I think I can sell 10,000 pounds next year without leaving our own town, which has about 2,000 inhabitants. This matter of creating a local market cannot be too strongly urged by our lights in apiculture.

My experience in apiculture has been very limited, as I have farmed and worked at other things most of the time, but I may in the near future devote my whole attention to bee-keeping. I rescued 2 colonies from the brimstone-pit, and bought 23, then sold one, and brimstoned one that was queenless. During the fine weather in December the others fell to robbing, so my apiary now consists of 93 colonies.

Last year I had some trouble in feeding bees. Will some reader of the Bee Journal say whether the following would be a good bee-feeder or not? Take a solid bottom-board and run saw cuts one-half way through the board, ⅓ of an inch wide and almost across the bottom; then if the hive tips a little forward and the feed is poured in through a slanting hole in the rear of the hive by means of a funnel, the syrup will run toward the front of the hive, filling the saw cuts. In this way a bottom-board could be made to hold a pound of syrup. Is it good, or not?

Last March I moved my bees about 75 yards without loss. They had a good flight the day before, and were moved in the morning and had a flight soon after; the only precaution taken being to disfigure the old place and lean something up in front of each hive.

In looking over the apiarian catalogues that I have, I noticed that whenever anything is said on labels for honey about candying, it reads like this: "All pure honey will candy," or "It will candy on the approach of cool weather." Well, I wanted some labels, but my honey would not candy, and I could not tell my customers that my honey would not candy; so I had some labels printed with a note commencing, "If this honey candies," etc., leaving a doubt in the matter. Now I know that all pure honey will not candy on the approach of cold weather, for the greater part of mine on hand is clear yet, although some has candied; and last year it candied more slowly still. I have known some honey to go over until June and still be clear, and that the best grades of heart's-ease honey. The neighbor mentioned above expressed his surprise at its not being solid by Dec. 1, but this was his first year in Nebraska, and will be his last, as he possessed the true Heddonian spirit and wanted to leave me the field; (but rather, he wanted to go to Kansas).

Now I have told some good things about bee-keeping in Nebraska, and I ought to tell the other side. There is nothing for bees in June, and a great many have died of starvation just as our Eastern bee-keepers were being almost flooded with white clover and basswood honey; but clover is making rapid strides for the West.

Seward,⊙ Nebr.

For the American Bee Journal.

Strong Colonies for the Honey-Harvest.

C. THIELMANN.

There is much said by some of our most able apicultural writers, about having the colonies the strongest or most populous "at the right time," or for the main honey-flow, thereby securing the most available honey harvest. This would be no secret to the majority of bee-keepers, if they could only know the time when that large honey-flow would come, or if some of the writers could tell them of its coming every year, so that they could prepare for it and have their bees strong for the harvest.

There may be some localities where the main honey-flows come regularly at the same time or about the same time of the season; but from nearly all the reports and accounts that we read, and also from my own experience during the past 17 years, this rule, on the whole, has not proved to be true. The main harvest here has come only 3 or 4 times at about the same time of the year, all the others having come either before or after the above-mentioned time, though all of them began from the middle of June to the middle of August, excepting one, which began on Aug. 22 and continued till Sept. 23, and gave me a surplus of about 3,500 pounds of honey. In a number of years there was a honey-dearth, when at about the same time of other years we had the best honey-flows. One year I had to feed about 20 colonies of the less stronger ones, to keep them from starvation, with abundant white clover in bloom, too.

I am sorry to say that I have not as yet reached that excellency of apiculture to know just exactly every year, when the largest honey-flow is coming. I have learned how to winter my bees best, but as yet I have failed to learn when the best honey-flow will be here. I would be very grateful to any of our fellow-bee-keepers if they would tell me every year when my honey-flow will be at hand. It seems to me that this is one of the questions that can no more correctly be settled than to foretell what the weather will be in the future; therefore I think that it is best, for the majority of bee-keepers to keep their bees as strong as they can all summer, so as to reap the harvest whenever it does come; and it surely will do no harm if the colonies go into winter quarters strong in bees. I also find that the strong colonies stand a honey-dearth a great deal better than do the weaker ones; therefore I fail to see any advantage in this latitude, with so many different honey-producing flowers at times, to prevent or lessen the increase of our colonies at any time in the summer; and, as a rule, they lessen enough themselves in winter and spring. I can never get my colonies too strong, but sometimes I fail to have them *all* strong enough.

Here white clover is generally abundant, but in some years it fails to yield much honey, and other years it yields plentifully. Basswood is also abundant, and blooms about the same time as it does in Mr. Doolittle's locality, but we have more failures from it than honey-flows. Corn generally comes immediately after basswood, but on an average it does not yield honey here once in 3 or 4 years. I was much surprised to read that Mr. Doolittle had never seen bees gather honey from corn; if he had been here the past summer, I could have shown him where they gather it. My bees stored about 1,000 pounds of honey from it, with which they finished about 2,500 partly-filled sections of the linden honey. It is the best and finest honey that they stored. If I mistake not, the last was the fourth season that my bees have gathered honey from corn (any amount worth mentioning) in 17 years. It is of a yellow whitish color, and can hardly be distinguished from the color of the red clover honey. All of it was very thick, and had a fine, smooth taste and aroma, being free from any after-taste.

In the season of 1884 my bees gathered considerable honey from birch, and very fine honey it was, too. It was no louse honey, either; nor was it gathered from the blossoms of the trees. When I examined it I was almost convinced that what ancient bee-men have said was true, viz: "When it honeys even the stones will yield honey." The honey from the birch was gathered in June, on the young twigs at the joints or junctions where the leaves connect with the twig. There was a little leaf or cup on each side of the junction, which contained the honey. I had never noticed this before, nor did I see it last year.

Three years ago I obtained the larger part of my surplus honey in August from horse-mint. I am not able to say whether I ever got any honey from that source before that or not, but I can say that I have not obtained any since that, with large quantities of horse-mint bloom within 80 rods of my apiary the last two seasons.

Under the above circumstances the readers can see that a certain time of the season could not be ascertained in which to have our bees in prime condition; nor would the subtraction-plan be of any advantage, as we do not know when the main harvest is coming.

Thielmanton,⊙ Minn.

For the American Bee Journal.

Ventilation and Temperature in Winter.

C. W. DAYTON.

As a specialist in the bee-business, I endorse nearly all of the article on page 5; however, I would differ slightly by giving upward ventilation and maintaining a temperature of 43° or 44°. Some way or another I have failed in wintering bees without upward ventilation, though I have had moderate success by contracting the brood-chambers so that it would be entirely filled with bees. Virtually, this would be upward ventilation, there being a draft passing out at the bottom of the hive.

While hibernation may be (and I believe that it is) a key to the winter problem, the old difficulty remains, viz., failure in making the bees hibernate not only in the forepart of the winter, but in the latter part also. To make bees hibernate for a time is an easier task to perform than it is to follow them up and find out what caused them not to hibernate. Each of these tasks I think that I have to some extent accomplished, and to give an idea to what extent, I might state that in an August number of the Bee Journal for 1885, I related how, in the previous fall, I prepared 60 colonies with upward ventilation and 40 colonies without upward ventilation, to be wintered in the same cellar; how in mid-winter I found moisture on the under side of the covers over the cluster of the unventilated colonies; and that on May 1 the 40 colonies were nearly all dead, while the 60 remained healthy. Again, last fall I prepared 111 colonies with ventilation and 1 without ventilation, and placed it in the same cellar with the 111; at this time that solitary colony is afflicted with disease, while all the others are healthy.

Let beginners not be led astray in the belief that upward ventilation or downward ventilation, high temperature or low temperature, natural or artificial stores, comprise all and the only requirements for successful wintering, as it will be found that they are only a few of the many factors to be considered. The soonest way of finding out the necessary factors for their cases, is to get extensively into the business, read, experiment and lose bees with the rest of us, and then, if they have been persevering and economical enough to have maintained a subsistence in the face of Borean winters, light crops and low prices, they will stand a chance, at least, of being able to truthfully say that they know which are the necessary factors in wintering, and can winter their bees successfully.

At this time it seems as though location may have something to do with the condensation of moisture. I always had supposed that the condensation of moisture was common in all countries where the wind blows and the rain falls. In the fall of 1882 I placed in the cellar 13 colonies that were in large observatory hives. Through the glass I watched daily, from Nov. 9 to April 12, the actions of the bees. There was no upward ventilation given, and they had been in the cellar but a short time before the glasses were dripping with moisture, and water ran from the combs. I saw individual bees leave the cluster and sip moisture a great number of times. On April 12 but one hive contained live bees, while on the bottom-boards of the others there was mold, moisture and dead bees fully two inches deep, and all the characteristics of disease were present. The hive containing live bees differed from the others in having two 1½-inch holes about 4 inches from the top. Were bee-keepers as apt to report failures as successes we would have more abundant evidence that this case is a fair example of the condition of hives where the bees die with disease.

From the writings of certain bee-keepers who winter bees with success without upward ventilation, in temperatures varying from 40° to 70°, it is made to appear as proper to let the bees arrange the ventilation, and store them in any moderately warm repository. In my case, and as also in the case of neighboring bee-keepers, such management has always proved very disastrous. For all of our skill we can figure no difference in effects in warm temperatures, except as bearing relation to moisture. Though we have been moderately successful in wintering bees packed with some porous substance, like the inquisitive Yankee we wish to know why every one cannot winter bees successfully without upward hive-ventilation, as does Dr. G. L. Tinker, H. R. Boardman, or Ira Barber.

Bradford, ♂ Iowa.

* * *

For the American Bee Journal.

Care of Bees in Winter.

J. H. ANDRE.

I have noticed in the AMERICAN BEE JOURNAL and elsewhere that bees, after they had been prepared for winter, should not be disturbed until spring. Perhaps this advice will be followed by some beginners, and when spring comes, and an examination of the bees is made, several colonies may be found to have died from starvation, or from some other trifling cause which might have been easily remedied if the bees had been examined every two weeks.

My bees are wintered in a fruit-and-vegetable cellar, that is visited with a light from two to four times per day. I also remove the dead bees from the hives every two weeks, and their humming may be heard at all times; towards spring it becomes a continual roaring, and yet my bees always winter well. I have had them breeding six weeks before they were taken from the cellar, and such colonies were the best of all. I put the most of my bees in for the winter as early as Nov. 15, last fall, and the balance I left out until Dec. 11, hoping that they would get a flight. Some that I had fed liberally were put into winter quarters without their young bees having a flight. This will be a test case, and if nothing prevents, I will speak of it again next spring.

Owing to poor health, and an inability to give my bees proper care, I found that one was queenless and had died, the cold weather of November having been too severe for their thin ranks, and the last survivors had the diarrhea. I suppose that some would say that it was pollen that caused it. What a pity it was not one of the late-fed colonies, so as to make it sure.

Lockwood, ♀ N. Y.

* * *

Convention Notices.

☞ The Northeastern Michigan Bee-Keepers' Association will hold its 4th auuual meeting on Wednesday, Feb. 3, 1886, in the Common Council Rooms at East Saginaw, Mich. The Sherman House, one block from the place of meeting, will entertain those present, at $1.00 per day. Saginaw people are working hard to make the meeting a success. Let us all go and show them that we appreciate their efforts.

W. Z. HUTCHINSON, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The Seventeenth Annual Convention of the New York State Bee-Keepers' Association (formerly the Northeastern) will be held in Rochester, N. Y., on Feb. 16, 17 and 18, 1886. This will be one of the largest meetings ever held in the State. A large number of our most experienced bee-masters will take part in the discussions, and several essays will be read from a number of our most practical apiarists throughout the country. The programme is complete. If you are young in the work you can not afford to stay away—if older, you may give some good hints, if you get none. We want a good display of all kinds of supplies and fixtures. We have a room on purpose for exhibits, and any goods sent to the Secretary in care of the "National Hotel," Rochester, N. Y., will be placed on exhibition, and either sold or returned to the exhibitor, as directed. Reduced rates at the hotels have been secured, also rates on some of the railroads. All will have to pay full fare one way—return ticket at 1-3 fare by presenting certificate from the Secretary, who will furnish them on application. We want an active vice-president in every county in State. Please name one or send the name of some one, for your county.

F. C. BENEDICT, SEC.

Local Convention Directory.

1886.	*Time and place of Meeting.*
Feb. 4.	Wisconsin State, at Madison, Wis. Dr. J. W. Vance, Sec., Madison, Wis.
Feb. 3.	N. E. Michigan, at East Saginaw, Mich. W. Z. Hutchinson, Sec., Rogersville, Mich.
Feb. 16-18.	New York State, at Rochester, N. Y. F. C. Benedict, Sec., Perry Centre, N. Y.
Apr. 27.	Des Moines County, at Burlington, Iowa. Jno. Nau, Sec., Middletown, Iowa.
Oct. 19, 20.	Illinois Central, at Mt. Sterling, Ills. J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Bees Wintering Grandly.—J. E. Cady, Medford, ♀ Minn., on Jan. 15, 1886, says:

We are snowed in up here with 2 feet of snow on the level. My bees are wintering grandly in a temperature of 48° above zero.

Bees did Well.—J. J. Hopkins, Brookside, ♂ Pa., on Jan. 2, 1886, says:

My bees did very well for this neighborhood, last year. I had 39 colonies last spring, and I extracted 1,160 pounds of honey from 10 of them, and took 1,641 pounds of comb honey from the balance; besides increasing my apiary to 55 colonies.

Learning by Experience.—Rev. Weisel Beale, New Madrid, ○~ Mo., on Jan. 19, 1886, says:

This is my fourth year of bee-keeping. I have learned some things by paying for them! Yet I feel a growing interest in the business. I will start in the season of 1886 with 15 colonies. I had about that number last fall, but I had to part with all but 4, which I transferred to this place when I moved from Shawneetown, Mo. I take great pride in my bees and love them. My hives are all nicely painted and equiped. About next year my experience will have ripened enough for me to presume to render an opinion on some of the important questions of the day in apiculture.

Extremely Cold Weather.—G. M. Doolittle, Borodino, ⊙ N. Y., on Jan. 14, 1886, says:

We have just passed through the coldest week ever known in this locality by the oldest inhabitant. The mercury scarcely reached as high as zero during the entire week, and was as low as 15° to 30° below zero much of the time. On one day the sun shone brightly all day, but the mercury stood below zero all through the day. Such cold on a clear, still day was never before known in central New York.

Bees in Good Condition, etc.—P. B. Thaxton, Blue Springs,⟜ Mo., on Jan. 18, 1886, says :

In the fall of 1883 I bought 6 colonies of bees. I have held my own very well, having now 120 colonies in apparently good condition. I have made but little money in the business, still I am not discouraged. I have read Prof. A. J. Cook's and Henry Alley's works on bee-keeping, which I consider very good, but the AMERICAN BEE JOURNAL has been worth more to me than everything else. I could not do without it. The article on page 6, by Mr. G. W. Demaree, is worth money to me. I am through feeding sugar syrup to my bees. All who have not done so, should read that article, and then work in the interest of the honey market, and, as Mr. Demaree says, "Let the sugar market take care of itself."

Bee-Keeping in W. Virginia.—W. B. Zinn, Holbrook, ⟜W. Va., on Jan. 12, 1886, writes :

Last spring we had a fine apple bloom here in W. Virginia, and our bees did finely while it lasted. They gathered some honey and got a good start in brood-rearing. After that was gone they had scarcely anything for a while. We had no white clover bloom. The past summer was too dry for bees to gather very much honey. We had some red clover that the Italians worked on. The black-gum bloom was good and the bees made good use of it. The linden-bloom was pretty fair, so the most of the old colonies gathered enough to winter on and some little to spare. I had 21 colonies last May ; during the season I had 9 natural swarms and I made 13 nuclei. I sold 4 colonies and 4 nuclei, which left me 35 colonies. My swarms and nuclei did not gather any honey to winter on. In October I commenced to prepare them for winter. I doubled them back to 25 colonies, and have them all in chaff hives with chaff cushions on them. They were all in nice condition up to the past week. The bee-business has been pretty dull here for the last 2 seasons ; some lost their bees last winter, and last summer being so dry, some have become discouraged. I winter my bees on the summer stands.

Heavy Frosts in Florida.—Jno. Y. Detwiler, New Smyrna,⊙ Fla., on Jan. 11, 1886, says :

The heavy frosts in this vicinty have utterly ruined our prospects for the coming crop of mangrove honey. The mercury is reported by various parties as being as low as 10° to 20° above zero. Fish have been frozen by the thousands, green turtles are floating on the water perfectly benumbed, and oranges are frozen as hard as chunks of ice. There has been nothing like it since 1835, when the mangrove was entirely annihilated. On the Peninsula the mercury was 20° above zero. I will report later, as to the extent of damage, when this "cold snap" moderates.

Amiability of Italian Bees.—Peter Billing, Pawnee City, ⊸Neb, on Jan. 15, 1886, says :

I am somewhat in darkness concerning the amiability of Italian bees. I have often heard and read that Italians were more gentle than the common bee, but with me this has so far proven the reverse. About 7 years ago I began with the common bee, and soon I could hive and handle them without much smoke or protection ; but after a few years they became hybridized, and were ugly things to handle. So I concluded to Italianize them ; but the bad temper has by no means subsided. They have their 3 distinct yellow bands, are good honey-gatherers, fast to increase, and I might say moth-proof ; but woe unto the man that jars the hive or comb when manipulating, or crushes a bee, or blows his breath among them ! for sometimes, seemingly without any cause, they will dash forth and attack one furiously. I would like to have some light thrown upon this subject through the JOURNAL.

[The bees are evidently cross hybrids ; not Italians.—ED.]

Decreasing Breeding, etc.—C. P. Dadant, Hamilton,⟜ Ills., writes :

On page 25, Mr. C. W. Dayton seems to be of opinion that the breeding should be decreased 37 days before the end of the honey harvest. I wish to warn the reader against too early a decrease of breeding. First, young bees are needed in the hive for nurses, comb-builders, etc., till the end of the harvest, or else older bees will have to remain at home in their place. Again, apiarists never know the exact date of the beginning, much less of the ending, of the honey crop, until it has taken place. It is safe to say that the apiarist who will try to forsee the date of the closing of the crop 37 days ahead, and decreases the breeding in anticipation, will, as a rule, be unsuccessful. Again, in Illinois and many other States there are two crops—the clover crop and the summer or fall crop. Mr. O. N. Baldwin mentions them on page 24, but he thinks that they are shorter than the real average of the past 20 years. The date of these crops is not fixed, and it is very difficult to be always prepared just in time, unless the bee-keeper remains fully prepared through the season. To sum up my views : Keep the colonies strong at all times, but have them the strongest during the flow of honey.

Red Clover Italians, etc.—Isaac M. Myers, Millersburg,♂ Ind., on Jan. 12, 1886, writes :

I purchased a colony of red clover Italian bees last spring, and I find that they are very quiet bees, and the honey is nicer than any that I had in 1884. I got 5 colonies from the one weak one. About half of the bees of the colony were dead when I received them, and I am wintering 6 colonies of the red clover Italian bees. I think that we should work to rear a bee that has a long proboscis, as well as for purity. Their honey is very clear and thick, and tastes nearly the same as bumble-bee honey, which is gathered from red clover and thistles. I find that they work largely on red clover. I will give my cure for bee-stings. I have been stung a great many times, and it swells on me nearly like a rattle-snake bite. I did use tobacco on it to draw the poison out at first, but one day I had some alum in my pocket and I thought I would try it ; I found that it did not swell hardly any after I wet the alum and rubbed the place where it was stung.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 25, 1886.

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 6@8c. per lb.

BEESWAX.—24@26c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for honey continues dull, and prices are ruling lower ; however, if the cold weather continues, it may improve the trade in a short time. We quote as follows : Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9½@11c., and in unglassed 2-lbs., 11@12c. Buckwheat honey in 2-lb. sections, glassed, 9c.; in 1-lb. sections, glassed or unglassed, 10@11c. Extracted—white clover 6½@8c.; buckwheat, 5½@6½c.

BEESWAX.—Prime yellow, 26@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows :— Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4@8c. a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12@15c. per lb.

BEESWAX.—Good yellow is in good demand, and arrivals are fair, at 20@22c. per lb.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14@15c.; 2-lbs., 12@13c. Dark fall honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very fine extracted honey this week at 5c., and stocks continue to accumulate.

BEESWAX.—Scarce and higher—22@25c.

CLEMONS, CLOON & Co., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote comb honey in 1-lb. sections at 14@16c., and 2-lb. sections at 12@14c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
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THOMAS G. NEWMAN & SON,
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923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

The NEW Heddon Hive.—We have made arrangements with the inventor, by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat. Further announcement will be made hereafter, giving prices, etc.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so *cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

Agents can sell the Guide and Hand-Book like "hot-cakes." Send us an order for five copies (with $2.50) and we will send you the Weekly BEE JOURNAL *free* for a year. This is a *rare* opportunity to get the Weekly BEE JOURNAL without cost ! !

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

The Guide and Hand-Book, is a book of ready reference and an encyclopædia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 64, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for $1.30

☞ The proceedings of the North American Bee-Keepers' Convention at Detroit are published in pamphlet form. A copy will be sent free to each paid-up member. All others who desire can secure a copy on the payment of 25 cts. F. L. DOUGHERTY, *Sec.*
Indianapolis, Ind.

Knitting and Embroidery.—We have received from the publishers a handy little book, entitled "Knitting, Crocheting and Embroidery," which gives full instructions to all who desire to become successful workers in the art. It contains 70 illustrations and 84 pages, bound in paper cover. The book will be sent by mail to any address for 15 cents, by J. S. Ogilvie & Co., Publishers, 31 Rose Street, New York.

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

All the Numbers from the beginning of the year are sent to new subscribers, unless otherwise ordered.

The Initial Chapters of "The Heir of the Ages," a thrilling and mysterious love-story, by James Payn, appears in the *Illustrated Graphic* (Cincinnati), commencing Saturday, Jan. 23. This is said to be one of the most interesting stories ever published.

To show the high appreciation in which the *Graphic* is held, it may interest many of our readers to know that the Nonotuck Silk Company, famous for its Corticelli and Florence Silks; the Emerson & Fisher Company, large carriage manufacturers, and the John Shillito Company, all leading houses of Cincinnati, occupied the choice pages of the grand holiday number of that paper, paying the sum of several hundred dollars per page.

The *Graphic* will issue, on May 1, a grand mid-summer number, which will be far ahead of anything yet published.

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for $1.30.

☞ The Eastern New York Bee-Keepers' Association will hold its annual convention in Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, January 26—28, 1886. The first session will begin on Tuesday, at 2 p.m. All interested in bee-keeping are requested to attend, and bring apiarian supplies for exhibition. The programme will consist of essays on important subjects, discussions, etc.
E. W. PHILO, *Sec.*

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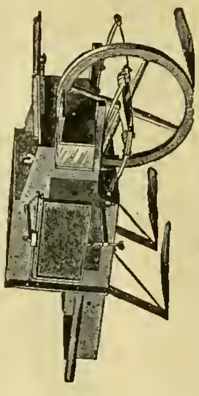

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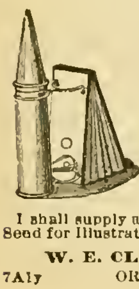

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Largest Bee-Hive Factory in the World.

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The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Feb. 3, 1886. No. 5.

The Heddon Hive has been placed in our Museum, and we have made a pretty thorough examination of it. It suggests the handling of hives instead of frames, thus lessening the labor of bee-keeping, curtailing the expense of honey-production, and adding to the profits of the apiarist. It and the system of management for which it was constructed, presents a "new departure" in many essential points, and will doubtless receive a thorough discussion by the correspondents of the AMERICAN BEE JOURNAL.

As it is claimed by some that the hive and system of management will cause a "revolution in bee-keeping," it becomes the prerogative of the apiarists of America to give the system a critical examination. This should be discussed in a friendly manner, with the sole object of arriving at the truth, and neither *prejudice* nor *interest* should be allowed to influence any opinion. Only a calm and deliberate discussion, *after* a thorough investigation of the merits or demerits of both the hive and system, can be of any value to apiarists generally.

The "claims" which Mr. Heddon makes on his system, are to be found on page 73, and to these the readers are referred in order to obtain a right understanding at the start.

* * *

Mr. Elias Thomasson, a bee-keeper of Louisville, Ky., and one of our subscribers, died of apoplexy at 9:30 a.m., on Jan. 11, 1886, in the 76th year of his age. After eating a hearty breakfast, he started out to give his little grandchild a ride on her sled. They went into Dobbin's drug-store to get warm. Suddenly he began to stagger, and before help could be given him, fell upon the floor. Everything possible was done for him at once, but in a few moments he was dead.

* * *

Two new Bee-Papers are received :—The Bee-keepers' *Index*, an 8-paged monthly published at 25 cents a year, by W. P. Beach, Ovid, Mich. : and *Rays of Light*, a 12-paged monthly, published at 50 cents a year, by J. J. Martin, North Manchester, Ind.

The Convention Pamphlet is well received. The following is a sample of scores of letters received concerning it :

BRO. NEWMAN :—The History of the North American Bee-Keepers' Society has come to hand. I am glad you have the enterprise to put in compact form what may be very valuable for reference in the future ; and while on the subject of enterprise, allow me to congratulate you, first, on being the pioneer to publish a weekly bee-paper, and secondly, on reducing the price so that no bee-keeper can afford to do without it.—C. C. Miller, Marengo, Ills.

You have done a great amount of work to produce such an important and interesting work. It should be in the library of every bee-keeper. It contains much valuable matter.—H. D. Cutting, Clinton, Mich.

You certainly deserve much credit for crowding so much of the early history of the Society into so few pages, and those who wanted the proceedings of the Detroit Convention published in pamphlet form, can now receive it in excellent shape, and there will be no more trouble in hunting over several papers to find the whole proceedings.—W. Z. Hutchinson, Rogersville, Mich.

We commend your enterprise in getting up so valuable and interesting a work.—Clemons Cloon & Co., Kansas City, Mo.

It is a valuable publication.—W. T. Falconer, Jamestown, N. Y.

The "History of the North American Bee-Keepers' Society," etc., is received. I am delighted to have so great amount of matter of interest, relating to apiculture, condensed into so small a space for reference. Notwithstanding I have very nearly a complete file of the AMERICAN BEE JOURNAL, extending back to its first issue, I am none the less delighted with the "Brief History."—G. W. Demaree, Christiansburg, Ky.

You have my thanks for preparing the "Brief History of the North American Bee-Keepers' Society." It will save valuable time in hunting up references ; is well edited, and the typographical execution is excellent.—Mrs. L. Harrison, Peoria, Ills.

The Convention History is at hand. It is a very nice book, indeed, in every way, and cannot fail of being appreciated by all those interested in Conventions.—G. M. Doolittle, Borodino, N. Y.

* * *

New Price-Lists have been received from the following persons :

Deere & Co., Moline, Ills—120 pages—Plows and Cultivators. It is an elegant production, artistically and typographically considered.

A. C. Nellis & Co., Canajoharie, N. Y.—96 pages—Floral and Garden Seeds.

Joseph Harris, Rochester, N. Y.—72 pages—Vegetable and Flower Seeds.

J. B. Mason & Sons, Mechanic Falls, Maine.—50 pages—Italian Bees, Queens, and Apiarian Supplies.

E. T. Lewis & Co., Toledo, O.—32 pages—Honey Extractors, Smokers, Foundation, Hives, Sections, Crates, etc.

C. F. Muth & Son, Cincinnati, O.—32 pages—Bee-Keepers' Supplies.

J. T. Fletcher, Clarion, Pa.—8 pages—Bees and Poultry.

Wm. Henry Maule, Philadelphia, Pa.—56 pages—Seeds of all kinds.

Any one desiring a copy of either of them, can do so by sending a postal card to the address as given above.

* * *

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

* * *

We respectfully call the attention of every subscriber to the seed advertisement of JAMES J. H. GREGORY, Marblehead, Mass. His large and complete catalogue is sent free.

The Rev. Robert West, editor of the *Advance*, of this city, to whom reference was made on page 19, in that paper of Jan. 21, acknowledges the receipt of our *demand* for a "full retraction and apology," but instead of doing that, makes another charge from a correspondent who says he has "reason to believe that there was an establishment on —— street in Chicago that manufactured bogus honey," and gives this as the *modus operandi :*

> "*It was said* to be done by extracting the genuine honey from the comb with the machines in common use for that purpose, then placing in a sunny room the comb, a number of shallow dishes of cheap sugar, glucose, molasses and water and a swarm of bees ! *It was said* that the industrious bees, rather than remain idle, would go to work and place the above mixture in the empty comb, but it was of course not honey, although apparently put up in genuine packages."

The *Reverend* gentleman also alleges that he is "familiar" with the "room" where this is done, but adds that "the room is not now so sunny as it might be, and there is reason to *surmise* that cheaper carriers have been substituted for the bees which the writer mentions."

The first witness brought forward only says he has *reason to believe* that there is such an establishment, and that *it was said to be done* in the manner mentioned. He knows nothing about it, except hear-say, and frankly says so ; but the Rev. Robert West says he is *familiar* with the establishment, and *surmises* that they have found a *substitute* for the bees ! !

Now, Mr. West should be *honest* enough to mention the street and number, and give the name of the proprietor. This he can do, for he is *familiar* with the establishment ! We *demand* the facts ! ! A clergyman should be *honest ;* and should be ever ready to "tell the truth ! !" *Surmising* will not do for proof.

In the first article on Dec. 31, 1885, Mr. West asserted positively that "men have learned not only to manufacture the comb, ...but now fill it, capping the so-called honey-cells by machinery," etc. ; but when asked to "retract" or "prove" the assertion, he drops the "machinery" part, and claims that the bees do the work, and are the adulterators ! ! He dodges the issue !

We affirm *most positively* that the Reverend gentleman's assertion about comb being made, filled and capped by machinery, is a *base fabrication ;* and we thus publicly DEMAND the proof, or a full retraction and apology ! Dodging the issue ; surmising ; or bringing witnesses who "have reason to believe" this, that or the other thing ; or averring that "it was said to be done" by some unknown person, will not answer ! Give us the plain, naked, absolute facts—*the proof*. Now it is Mr. West's turn—let him speak out ! Either prove the assertion, or prepare to defend a suit for damages done to the pursuit of bee-keeping, by his bold and base assertions !

We deprecate adulterations of all kinds, and would favor a law to put adulterators in the pillory, or flog them at the whipping-post ; and we also detest those who show their ignorance at every turn, by denouncing honest products, and injuring an industry by their stupid or malicious blunders !

QUERIES

WITH

REPLIES by Prominent Apiarists.

Origin of Honey, etc.

Query, No. 189.—Where does the honey come from? Is it in the ground just waiting for the right kind of flowers to grow so that the atmosphere can pump it up through them? Is there any danger of its being all pumped out? Does the same combination of elements that makes plenty of honey, also make the sorghum-stalk and the sweet-potato sweet? Did you ever notice that poor honey years were poor sorghum years, and that the sweet-potatoes were not sweet? I know that it was the case here the past year. An old molasses-maker says that none of the sorghum brought to the mill this year made more than half a crop, and I know that our sweet-potatoes were not sweet, as in other years.—Vermont, Ills.

I will try and answer this in sections as asked: 1. From the nectar of flowers. 2. Yes. 3. No. 4. Nearly so. 5. I have never noticed any difference.—H. D. CUTTING.

Honey is made from the nectar of flowers, and is as thin as water when first collected. The nectar is a secretion by the nectariferous glands of flowers. A proper humidity of the soil and warmth are among the conditions most essential to free nectar-secretion.—G. L. TINKER.

The honey comes from the ground the same as does the milk that Old Brindle gives. It is not unlikely that weather that would effect nectar-secretion might possibly effect cane and sweet potatoes. As I never raise cane, I am not authority on that point. When the cow pumps all the milk out of the ground, then we may fear a dearth of nectar in the flowers. —A. J. COOK.

Top-Storing.

Query, No. 190.—I am satisfied that I do not have sufficient room on top for surplus honey, and so I desire to ask whether side storage could be adopted successfully. My American hives have 10 frames, 12x12 inches. Could I not take out 3 or 4 combs at the beginning of the basswood harvest and fill the space with sections, replacing the combs after the basswood harvest is over? Would the queen not use those sections for brood? If so, how could I prevent it?—E., New York.

The plan could be successfully adopted, and the queen could be kept out with perforated-zinc. Had I such hives I should change to such a style that gave an abundance of room for top-storing.—W. Z. HUTCHINSON.

Look at Mr. Doolittle's articles in some of the past numbers of the AMERICAN BEE JOURNAL. He makes a success of *side-storing.* I would rather get new hives, if necessary, but by tiering-up you ought to be able, on your present hives, to have 200-pounds surplus room. Is that not enough?—C. C. MILLER.

Wide-frames with sections may be used at the side of such hives in the manner indicated, and perforated-zinc or a slotted division-board used to keep out the queen. I have used just this arrangement with deep frames, but I do not like it.—G. L. TINKER.

Side-storing can be adopted, but it is not desirable; unless the sections are carried above for completion, they are not nice. The queen can be kept out by the use of a queen-excluding division-board. I think it much better to put crates of sections above, and tier up till all desired space is given.—A. J. COOK.

The queen would not get much chance here to use the side sections for breeding in basswood time. Queen-excluding metal would prevent her from reaching them at any time. I think that the removal of "3 or 4," or even 5 combs, after June 1, will be advantageous; and if once tried you will continually practice it thereafter. —JAMES HEDDON.

I should do as you suggest. With me, queens are not as apt to go into the side boxes as into those on top. Eight American frames are enough for any time of the year for a brood-apartment, and 5 would be ample when practicing the contraction method.—G. M. DOOLITTLE.

If you have not room on top, "make room;" then if you cannot get it on top, cut down your frames. You can get honey stored in sections in the brood-chamber, but you do not want to; at least you would not if you lived in my locality.—H. D. CUTTING.

My favorite remedy would be to get the bees out of such a hive as you describe, as soon as possible. But others will differ from me about this. With the cases I use in my apiary, either for holding sections or shallow frames, your hives could be "tiered-up" till your bees would have all the room they could utilize. "Side-storing" as a system, in a large apiary is objectionable on account of disagreeable manipulation in the brood nest, and additional labor in many ways.—G. W. DEMAREE.

Side storing in American hives in sections has never been a success with myself. Perhaps it would prove more satisfactory in other localities. I can see no reason why room enough cannot be given by tiering up. I have tiered-up American hives 7 to 10 cases of sections high, and found that the bees would work well in the upper tier, if care was taken to protect them by blankets and quilts.—J. E. POND, JR.

If you use side-storing sections or crates you had better make larger hives, as your hives are not any too large for breeding. We tried side-storing for 5 years on about 60 American hives enlarged so as to take 20-pounds on each side, simultaneously with top-storage, and the side-storage was a total failure, owing to the storing of pollen in this side honey, and insufficient filling of the crates at the side unless the bees were exceedingly crowded. Your American hives ought to have 13 brood-frames; this would also increase your surplus top-room.—DADANT & SON.

Closing in Bees with Wire Screens.

Query, No. 191.—What are your opinions about closing bees in with wire screens? We use a modified Simplicity hive, with a portico 3 inches deep, and when we put them into the cellar we covered the porticos with wire screens, the wire being 3 inches from the opening in the hive. We feel a little uneasy about them. There are 15 colonies. We saved 7 colonies out of 8 that were so prepared last year.—Linn Co., Iowa.

I am opposed to closing in bees, but if you keep the screen cleaned off you will have no trouble.—H. D. CUTTING.

Wire-cloth tacked over a portico would be less objectionable than to tack it directly over the entrance. I do not believe that either one is of service, except to keep out mice.—G. L. TINKER.

If the bees remain quietly in the hives without knowing that they are confined, it will make no difference; but if they discover that they are confined, and begin to worry, the results may be very serious.—G. W. DEMAREE.

I consider the screens worse than useless; just so much worse as is their cost and the labor of putting on. As a rule they will not effect the wintering of the bees one way or the other as you have them prepared.—G. M. DOOLITTLE.

The screens prevent the dead bees from being scattered on the floor; aside from this I do not know what good they do. If they caused the bees to worry, trying to get out, I should remove them. I do not advise their use.—W. Z. HUTCHINSON.

We prefer to put the bees in the dark and leave the hives open. Those bees that go out die anyhow if confined. They leave because they are ill at ease. You may always expect to lose some bees that way in the cellar.—DADANT & SON.

I have never wintered bees in special depositories, but on principle, and from careful study of the experiments of those who have made it a success, I should advise leaving the entrances entirely unclosed, but keeping the depository completely and utterly dark.—J. E. POND, JR.

I was once in the cellar of Mr. E. D. Godfrey, of Red Oak, Iowa, and saw about a hundred colonies fastened in with screens, the only ones I ever saw thus fastened. They were then in fine condition, but I do not know how they came out. I wish that he would tell us. I think that I should rather have the entrances open—at least cleaned out every 2 or 3 weeks.—C. C. MILLER.

I should prefer to have nothing over the entrances. If they do get uneasy and try to get out, this will irritate them, while the fact that they can come out is not undesirable. Such a screen could serve no good purpose except to keep mice out, and if mice are in the cellar, they should be caught in a trap.—A. J. COOK.

I cannot discover as yet just what caused many of my healthy bees to leave their hives, fall, and perish on the cellar bottom. I have thought that such a device as yours (which has been used by others) might be valuable. I do not think that it can produce any bad results the way you have it arranged.—JAMES HEDDON.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; O+ east; +O west; and this ♂ northeast; ~O northwest; O~ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Whom do Bee-Conventions Benefit?

DR. C. C. MILLER, (179—340).

Some time ago a prominent writer in bee-culture asked me the question, "For whose benefit are bee-conventions?" I have never seen the question answered, and I am not sure whether I can give a correct answer in full, although I have given it some thought. It is a matter, however, deserving of some attention, since the manner in which the time is occupied at a convention, depends largely upon the conception had, as to the object of the convention.

As to the importance of the manner in which the time is occupied, it is only necessary to consider the thousands of dollars which these conventions annually cost. Take the meeting of the late Detroit convention. Estimate the average traveling expense of each member at $10; living expenses for four days (or parts of four days including coming and going) at $1.25 per day—$5; time lost, $5; making $20, probably a very low estimate; but if 100 are in attendance it amounts to $2,000. Other conventions will cost much less, but there are a great many of them.

I suppose in the case of many individuals the pleasure of social intercourse will amply recompense all cost. I suspect, however, that these meetings would not be very largely attended were it not for the expectation of information to be gained. Receiving and giving information is probably the prime object of bee-conventions.

In attendance are found those who are interested to different degrees in bee-culture, from the man who makes his entire dependence upon the business for his bread and butter, to the one who has one or two colonies, to which he never has given (and perhaps never will give) much attention. I suppose it is desired that all these classes shall attend—certainly pressing invitations are given to them. Although all these different classes may find something of value in any convention, it is hardly to be supposed that the grade of information most needed by the beginner will be such as to be most valuable to the veteran.

Perhaps it may be well, right here, to consider what are some of the sources whence one can obtain light as to bee-keeping. I may name these: Observation, experiment and experience; conversation with, or instruction from other bee-keepers; books upon bee-keeping; periodicals devoted specially to bee-keeping; and conventions. I do not now think of other sources. Perhaps the last three, or, omitting conventions, books and periodicals alone are sufficient for a tolerably full course of instruction in theoretical bee-keeping. Under ordinary circumstances, if a young man with no knowledge of the business, but contemplating entering upon it, should ask my advice as to going 200 or 300 miles to attend a convention, I should advise against it. He had better take the money and invest it in books and bee-papers. Let him post himself thoroughly in the several (mind you I don't say *one* of the several) excellent bee-books. But no matter how familiar he may be with these, there are always new things coming up, thousands of bee-keepers are experimenting in different directions, and these things he can have the benefit of, by taking bee-papers. Indeed, if I were restricted to only one source of information outside of my own experience, I would unhesitatingly take the bee-papers. The days for the arrival by mail of my bee-papers are as distinctly marked in my mental calendar as are Saturdays in that of the school-boy; and I never expect to become so advanced in the management of bees that I shall not be interested in these printed messengers. What, then, is the need of conventions, if books and papers are so complete?

In reading a communication in a paper, no matter how fully the writer may treat his subject, there are likely to be left out points on which we would like to question him; at a convention we have the opportunity to do this. Then, too, at a convention, aside from the social privileges, there is a sort of mental stimulus from the meeting of so many interested in the same pursuit, that seems to stir up some to bring out important facts that otherwise might never come to light. Suppose, now, at a convention some one happens in who has a few bees—perhaps in box-hives—and he considers that here is a fine chance to gain some information, so he begins asking whether the queen or the drone lays the eggs (and I have known something not so very far removed from this to happen); how much time do you think he ought to be entitled to occupy in this way? And yet the elementary facts, such as are familiar to even those of very limited experience are just the ones which this man needs to learn, and the time of the convention could not be spent more profitably, *to him*, than in dealing with just these elementary matters. But if the time were taken up in this way, how many, think you, would be in attendance whose experience and wisdom would make a convention valuable? It is not probable that diverse interests will allow all to be united in their views, but looking from the stand-point of one making bee-keeping not merely a recreation, but the means of livelihood, I should say that the chief participants should be (and perhaps they usually are) those of experience, who, by a mutual interchange of thought may each give and receive information. If the inexperienced, by their attendance, can catch some of the sparks as they fly, so much the better for the inexperienced.

Whilst upon this subject I will refer to another matter that needs correction. In the report of the Detroit Convention, page 810 of the AMERICAN BEE JOURNAL for 1885, it is stated, "Only about one-third present at the meeting had become members of the Society;" that is to say, about 200 persons were there who had the full benefit of the convention and contributed nothing toward it—not even the paltry sum required as an annual membership-fee. Is not this being a little *too* free?

Marengo, ♂ Ills.

For the American Bee Journal.

Preserving Bee-Papers for Reference.

REUBEN HAVENS.

Having been confined to my room the greater part of the time for the last three months, with rheumatism, I have improved the time in reviewing and studying up bee-culture. I find the bound volumes of the AMERICAN BEE JOURNAL very convenient, and intensely interesting. I have an Emerson Binder in which I preserve the numbers throughout the year, and then have them neatly bound. With the index of subjects treated, and the index to correspondents, it is almost invaluable as a book of reference. In this way I often get needed information with but little trouble, and with no delay.

In no business is the motto "Strike while the iron is hot," or in other words, do everything in its right time, of more importance than in the bee-business; in fact, success almost entirely depends upon it. A little delay often causes heavy losses. If this view is correct, and I think every thoughtful person will accede to it, then no better investment can be made by bee-keepers than to take the old reliable BEE JOURNAL, *every number of it*, and at the end of each year have them neatly bound; not merely for the name of having a bee-library, but for the purpose of close and persistent study.

These thoughts have been brought out by remarks of bee-keepers whom I have endeavored to persuade to subscribe for the AMERICAN BEE JOURNAL. One said, "I wouldn't give 15 cents for it;" another, "I think I will take it three or four months next summer;" but in every case where objection was made, there has been failure in the past, and undoubtedly will be in the future. In some cases the parties were very enthusiastic a year or two since, but now they are completely discouraged. In fact it requires some nerve to withstand the losses of the past two years, and keep a "stiff upper lip."

Onarga, Ills.

* * *

Read at the New York State Convention.

Development of the Honey Market.

R. F. HOLTERMANN.

Perhaps no theme, now that our bees are in winter quarters, is of greater interest to the producer of honey. I feel my deficiency in dealing with this subject, yet my labor will not be in vain if one new idea or thought is thrown out, if old ideas are more prominently brought before us, or more united efforts decided upon before the discussion closes.

Why should we cry about our markets being overstocked when all we have to do is to enlarge them, and thus increase the consumption of an article which will stand upon its own merits when once introduced? Our markets have not been fully developed, and consumption has not reached its full capacity until every man, woman and child uses this and no other sweet. What are the means to be employed? We can all suggest. Four years in attendance (generally selling honey) at the Toronto Industrial Exhibition has given me a few ideas of the difficulties to overcome.

We want to disseminate more knowledge about apiculture, not for the benefit of the bee-keeper, but in periodicals where it will reach the masses that know nothing about it: state the progress that apiculture has and is making; what vast quantities of honey are produced and consumed compared with former days, and how this progress permits of such a production. Little articles written as reading matter and news of the day, will do a vast amount of good to educate the masses to consume honey. They will be interested, and the idea of using honey brought before them again and again, will cause them to realize that if they do not use honey as a staple article they will not be up with the fashion; and that foolish feeling and idea which sets one-half the world blind to everything, can be made to work to our benefit and—for once—that of its slaves.

As soon as a new outlet is found for the sale of honey—be it to the pork-packer, tobacconist, or some other business—send an item to the paper of large circulation, stating that "pork-packers (or whoever they may be) are commencing to use honey successfully in their business, etc." If bee-keepers had the energy of the general-manager of some quack medicine, who works up such a market by judiciously appearing before the public, bee-keepers would soon find that they could not supply the demand, and as ours is an article of merit the market would not decrease. Therefore we want to do a liberal amount of advertising, setting forth the merits of this sweet above all others for children, invalids and people in sound health—something we never do except occasionally in a bee-paper, the last place it should be put to enlarge the market.

At exhibitions held in larger cities we want a large and prominent exhibit of honey and apiarian implements. Start by giving the directors a nice can of honey; they are human, and will interest themselves on our behalf as to space and general accommodation. Give our prominent people a sample if they do not buy, and after tasting they will generally leave an order and feel under an obligation to speak of the fine display and quality of your honey. Do not wait until a reporter makes himself known to you, but hunt out those of the leading papers, pave the way to their good graces by a little honey, and in that way the exhibit will receive an amount of attention by the public that it otherwise would not. Having in this way secured the co-operation of influential people and the public generally, it will soon become a habit for them to buy honey.

As to the quantity in packages: Regulate it yourself by the package you give them at first; you can come to a larger. Toronto people have been spoilt by too small a package down to a smaller, but hardly advance being placed upon the market. Five years ago we sold the bulk of our honey in 5 and 10-pound packages; a few in 2½, but the latter was the smallest. Year after year the size has decreased, and to-day it is as difficult to sell a 2½-pound, if not a 1-pound package, as it was five years ago to sell a 5 and 10-pound packages. The sellers are too blame for this, not the buyers. At your exhibition you will find so many wise heads ready to condemn the whole display, because it is too large; they say, "that cannot be all honey!" but you, who listen, know that they are a class who condemn with their own ignorance as a basis. Explain to all who will listen about bee-keepers, be courteous and endeavor to create a kindly impression, and you make a step in the right direction. After the exhibitions follow them up by establishing a general agency under a man who knows what is wanted, or if circumstances permit, sell honey yourself. Visit nice, clean groceries, fruit-stores and chemists, and there arrange to set up a neat display in the window or on the counter, and leave a stock to sell from. Do not be discouraged by the storekeeper saying, "No one asks for honey;" tell him it is because they do not see it to buy; even if the party has but little push, seeing it will bring customers.

Place honey upon the market at the right time. There is no use in rushing it on when small fruits, etc., are abundant, and see that the display is kept up. Put your name upon every package. Whether comb or extracted honey every effort should be made to place it upon the market in as uniform and attractive a manner as possible to the eye and palate. The sections should be white, clean and well preserved, and any inferior cases should be disposed of at your exhibitions by cutting from corner to corner, making four pieces, each attached to the side of a section; these can be sold upon the grounds in large quantities. Observe the utmost cleanliness with your extracted honey; seldom, if ever, extract it before it is one-third capped, then put into large, deep tanks, which will give neither taste or color to the honey, and in a few days the thin, green honey will find its way to the top, and can be removed; the remainder, if clover, should be sealed within a week's time; thistle, the same; basswood a little longer, and you have an article fit for any man. Keep dark honey from spring or fall separate; never place it upon the retail market, for it blocks the way for a more desirable article. Many more valuable suggestions will doubtless be thrown out by the discussions; may all have a beneficial effect.

I would suggest a discussion upon the advisability of placing extracted honey upon the market in a granulated form; then we would secure a uniformity in the appearance of the article. If we do our best, it will granulate; and we would educate the public mind to the fact that if granulated it is above suspicion.

Brantford, Ont.

* * *

For the American Bee Journal.

Wintering Bees, etc.

L. H. CROWELL.

On Dec. 4, 1885, we had a furious snow-storm, and it grew quite cold, so I put my 19 colonies and 1 nucleus into the cellar; as I had not enough to fill it, I built a room 8x8 feet, independently of the cellar-walls, out of boards, and lined it on all sides within with building-paper, making it perfectly dark. A 2-inch pipe runs from the centre of the room, commencing 6 inches from the floor, which is connected with the stove-pipe above by extending it into the stove-pipe 3 feet. Before I put my bees into the cellar there was a draft which would draw the blaze of a fire 2 inches to one side, so I was sure of good ventilation.

I have kept the temperature of the bee-room at 41° above zero most of the time. We had a thaw about Dec. 24

to 29, when it rose to 40°; but I kept it there until it became cold again, by using snow and salt. The mercury is about 3° lower outside of the room. When it is zero out-doors I open the outside doors of the cellar to purify the air. My bees have been very quiet, and there are very few that are dead—not more than a quart, both inside of the hives and on the cellar floor, and they are dry, so that there is not the slightest smell from decaying bees, and there is not the least sign of bee-diarrhea among my bees.

I was much pleased with Dr. Tinker's article on the hibernation of bees, page 5, for it confirmed several observations of my own. My bees bred late in November, and they are wintering partly on sugar syrup. They have about 6 inches of oat-hulls over them. These oat-hulls I obtained from an oatmeal mill in this place; they were so clean and easy to get that I thought they would be just the thing. I never saw a hive opened until April 7, 1885, when I got 10 colonies, which I have increased to 19. I lost one by swarming out after being hived. I secured 150 pounds of comb honey. White clover did not seem to secrete any honey, and for 3 weeks in the middle of April it was so cold that the bees could not fly.

I have 2 acres of Alsike clover for next year, and I expect to sow a bushel of the seed the coming season. I am glad that you are refuting that nonsense about manufactured honey. Give them the law!

Rockford, Ills.

For the American Bee Journal.

Quinby Standing-Frames, etc.

H. L. JEFFREY.

On page 28, Mr. T. M. Coleman asks for further explanation of the reversible frame mentioned in my report on page 821 of the AMERICAN BEE JOURNAL for 1885. The real dimensions of the Quinby standing-frame are, two end-bars, 1½ inches wide, 11½ inches long, and ½-inch thick; the top and bottom bars are nailed ¼-inch from the end, towards the centre of the ends. They are cut from material ⅞ of an inch wide, ½-inch thick, and 16 inches long, making the inside measure 16x10⅛ inches. The bottom-bar is only ⅜-inch thick, and the frame is fastened to the bottom-board by a hoop-iron hook.

As mentioned in my report in, 1877 all of my hives and frames were in use, and of the Langstroth size (17⅝-x9⅛). with no material at hand fit to make frames of; but there were fifty or more of the above described Quinby standing-frames on the place, and by shortening the wide end-bar to 9⅛ inches, from the original 11½, they were made the Langstroth depth, and by driving a stout nail in the end of the frame, it made a hanging frame with closed ends. These frames were so used for the rest of the season, and I think that in 1878 some of them were used for nuclei hives, by laying a piece of lath on a board for each end of the frame to rest on, and with 2 of the frames together and a piece of board on each side, a string tied around, a strip of board laid on the top, a 2-frame nucleus was set up on two standing-frames; I believe that several were made by setting the frames against one side of some of the occupied hives, with a division-board to cover the exposed side of the combs, and a few handfuls of earth to make the entrance the right size. In 1878, if I remember rightly, some of them were turned the bottom-side upward, to see if the bees would not fill the frame completely full of comb. The next thing was to see if they would be as likely to fill the lower corners of the frames with drone-comb, if the frame was turned bottom upward, and several trials showed that as apt as the bees are to fill out the extreme lower corners with drone-comb, just so sure they would fill it with worker-comb if the frame was inverted.

Then, to try the matter further, I made 2 or 3 Langstroth hive-bodies, rabbeted top and bottom with ⅜-inch square cleats 1-inch apart in each end of the hive, and cut from some of my Langstroth frames the drone-comb in the lower corners. Half of the combs were hung in the bodies in their proper position, and a cleat tacked across the ends. The hive was then set up on its end, and in the odd spaces combs were inserted from the bottom; thus the combs 1, 3, 5, 7, and 9 were tops upward, and 2, 4, 6, 8, 10 were bottom upward. As soon as the hive was put in its proper position, every comb which was bottom upward was filled out with worker-comb, and the others were filled out with drone-comb. The hive was then set upon its end again, and the combs drawn out, the drone-comb cut out, and the hive turned so as to bring the frames bottom upward, when worker-comb was built. After trying the Langstroth hive-bodies in 1880, 1881 and 1882, I learned that it was a positive law that the bees would move the honey to the sections from the reversed frames, when in its place eggs were deposited, actually making the colony stronger in bees and stores as the result. Thus I gained two points, viz., frames full of worked-comb, and the comb built firmly in the frame. I also received a strong hint as to how to get sections finished up and not to extract from the brood-chamber.

Now as to the closed-end frame: I observed that the combs were filled out with brood faster in the spring; that the hoar frost did not collect on the ends of the hive and project between the combs as it did on the regular narrow end-bar frame; that the bees were not as apt to fly out on those bright winter days because of the space between the frame and the hive; that every cold spell in the spring was not as plainly felt; and that in packing for winter the frames were pressed closely together and packed firmly, with leaves. If a hive was moved, there was no swinging of frames to irritate the bees. A comb with a queen-cell on it and a board each side, would save a queen and much inconvenience. The nails for the projecting arms gave place to a strip of hoop-iron with a hooked end and a screw in the centre of the frame, and various other devices to invert frames, until 1885 when reversible wires were used, and so far they "fill the bill" satisfactorily, so that 1,000 pairs will be tried the coming season.

In 1883 I made a few frames the Langstroth size, with 1⅜-inch end-bars; in 1884 I made a few more of them, and in 1885 I worked them in 25 hives under various conditions, as a test for myself, and I used them with the vilest hybrids and the gentlest Italians and pure blacks to see how they worked; two or three others making similar tests with the same frame are satisfied, and expect to dispense with all but the reversible Langstroth frame with 1⅜-inch end-bars. The reversible frames have advantages enough to over-balance all objections.

REVERSIBLE HIVES.

On page 37, Rev. W. F. Clarke says, "Come on, Macduff!" So I will, but on the same side. I have not seen a description of Mr. Heddon's hive, or know aught of it except what I learned in that article, and from *Gleanings*; and if I have a correct idea of the hive, he is not alone, as there have been several hives in Connecticut of the same principle and construction; that is, with a horizontal dividing brood-chamber. I believe that some are now in existence, one being a movable-comb hive built in 1879 or 1880, the others of older patterns. In 1878 I transferred a colony from an old hive of that plan with slotted top and bottom. The principle, though old, is susceptible of many advantages. Though I have not seen Mr. Heddon's new book or circular, yet I can substantiate many of his claims from what I have seen of the principle of the hive, and, patent or no patent, I expect to try some hives of that principle this year.

Washington Depot, Conn.

For the American Bee Journal.

Mr. Heddon's New Bee-Hive.

G. M. ALVES.

It seems that Mr. Heddon's new hive is on a boom. Mr. Hutchinson will run all of his next season's swarms into them, while the Rev. W. F. Clarke, with his refreshing enthusiasm, predicts that a revolution in bee-keeping is impending, and with glowing words, kindred to his announcement of the hibernation theory, in true chivalric style, throws down the glove and challenges each and all comers to raise it. Now, the writer has no disposition to meet the "shining lance" of the Reverend gentleman, nor to disparage the hive, but thinks that we should not be too hasty in throwing away what we have already found reasonably good.

Perhaps those who have been trying to follow the bright inventive genius of Mr. Heddon, who at much expense of both time and money, and who have now about equipped their bee-yards with what Mr. Heddon now calls "old goods," will with despairing sadness realize the fact that their fertile leader has again changed ground, and asks them to again throw away the old and accept the new. Perhaps to them it will seem rather too much for conservative and plodding human nature. Perhaps they will think that Mr. Heddon is too non-conservative to make a very good leader. Perhaps there are others who think that Mr. Heddon belongs to that class of men who live for the good of posterity; that his very bright and inventive mind originates too much, and runs into devious channels to make him a man of staid convictions; that the bee-world, as well as the outside world, require such men, but that it is posterity which soberly considers, cons over and selects for their use from the extended researches of such geniuses.

If there be bee-keepers of such opinions, shame on them all! Are those who unshrewdly guessed that inventive genius had reached its acme, to be re-imbursed for loss sustained from their bad guessing? Or are those who will say that Mr. Heddon yesterday championed the hanging frame, and to-day chooses the Huber? that a short time since he battled valiantly with Mr. Doolittle for non-separators, and now prefers separators? Are these men to be heard? By no means! Who shall deny the right of change, or who shall cripple the wing of genius?

But with particularity to the hive, the writer propounds these questions without undertaking to answer them himself:

1. Is there not too much machinery about it?

2. Does it not require too nice mechanical work—too precise measurement of its details—to be readily adapted to general use?

3. Can men who pursue bee-keeping for profit afford, at the present price of honey, to use $4 hives?

4. Will not the interchange of two shallow hanging-frame hives answer all practicable purposes of inversion?

Henderson, ⟜ Ky.

For the American Bee Journal.

My Experience in Bee-Keeping.

A. C. FASSETT.

On page 92 of the AMERICAN BEE JOURNAL for 1885, will be found my report for 1884, stating how I built up my apiary, the kind of hive that I use, etc., and that at the time I wrote, Feb. 9, 1885, I had in all 55 colonies of bees in winter quarters—15 packed on the summer stands, and 40 in the cellar; those in the cellar were kept dry and warm. I had no thermometer that I might see how the temperature ranged, though I know that it did not freeze there; in fact, they were kept the same as I had wintered them before with scarcely any loss.

I also stated the kind of bees that I had, and that I expected to Italianize all of them the next season. Well, I did do so, and with not much trouble, either, for I only saved 2 out of the 55 colonies, and one of them had a queen that would not lay. I had all of my bees in winter quarters by Nov. 23, 1884; some became restless in February, and Feb. 25 being the first day since Nov. 23 that was warm enough for bees to fly, I took them all out of the cellar for a flight, and found 3 dead colonies. On April 5 I took them all out of the cellar to stay, and found 29 colonies dead, and also 14 out of the 15 that were packed outside, were dead. All died with the diarrhea, I think, which left me 9 rather light ones on April 5, 1885.

They then began to dwindle, and I thought that they were all going, so I took all I could find and put them into 2 hives—queen and all—and the result was that I saved 2; but one of them had to do all the breeding for both until one could rear a queen. I kept them both strong by taking brood from the old queen. I then bought one good colony and 3 Italian queens in May, and was successful in rearing queens, so that by July 1 I had 30 small colonies, all doing finely; but on account of the scarcity of late honey, the fall breeding was a failure, so I united the colonies, and now have 17, some of which are weak. I wish that some prominent correspondent would write an article on how to handle colonies that are light in both bees and stores.

I have 14 colonies in the cellar and 3 outside. I put them all into the cellar at first, but they would not keep still, so I had to take the 3 out and pack them; up to this date (Jan. 22) I have not lost a single colony.

Watson, ♀ Mich.

For the American Bee Journal.

The Manufacture of Eggs and Combs.

S. F. NEWMAN, NORWALK, O.

EDITOR OF THE BEE JOURNAL.—I enclose an article on "Manufactured Eggs," the writer of which is evidently disgusted with certain editors who are constantly giving editorials on subjects about which they are totally ignorant—thus misleading the public. Recently editorials have appeared in the Cleveland *Leader* and Chicago *Advance*, both stating that honey-combs are made, filled with bogus honey, and capped, all done by machinery. A certain professor also gets a "dab" for his "scientific pleasantries." Possibly you may think the article worthy of a place in the AMERICAN BEE JOURNAL. It may be that the "traducers" of comb honey can be reached by ridicule, if in no other way. Here is the article alluded to:

"PODUNK CORNERS, O.

TO THE EDITOR OF THE CHRONICLE: *Dear Sir:*—How rapt in astonishment is the mind when it reverts back over a period of 50 or 60 years, and notes the wonderful discoveries, improvements and inventions that have been made which tend to promote the comfort, happiness and welfare of mankind. The last of all these, but by no means the least useful, is the remarkable discovery of a process for manufacturing artificial eggs, upon which the editor of the Cleveland *Leader and Herald* has quite a lengthy editorial in his paper of Dec. 16, 1885. This discovery, like many others, seems to have happened just at the time when most needed, for, as we all know, eggs are now used for many purposes for which they were not formerly used, and their increased use has so increased the price that it has become quite burdensome; but it is more than probable that as soon as arrangements can be made for obtaining them by the new process, their price will be materially reduced so that all, the poor as well as the rich, can always be supplied with an abundance of this desirable 'fruit.'

"These eggs are so perfect and so like those obtained the usual way, that it is impossible to distinguish them from the genuine, and so far as we have tested them for culinary and scientific purposes they are fully equal. The editor of the Cleveland *Leader* is mistaken in saying they can be detected by boiling, and I think he does wrong to throw any obstacle in the way of this new enterprise.

"The gentleman who discovered the process by which these eggs are manufactured, resides in this county. He is a philanthropist of the highest order, constantly seeking to do that which will benefit his fellow men. He has distinguished himself in many ways as a scientist, and probably is not excelled in that direction by any living man. When these eggs were first tested to determine their hatching qualities, it was found that they were deficient in some very important ingredients. Although the chickens were perfectly formed, their bones lacked that firmness necessary for easy locomotion. A leading physiologist residing here, having been consulted, advised the inventor to mix pulverized bone with the albuminous part of the eggs. This advice was followed and worked admirably.

"There is another defect, however, which seems not to be so easily overcome. The young chickens are entirely destitute of feathers, and no way has yet been discovered to remedy the defect. The inventor held the theory that the feathers came from the yolk, and he thought that if a larger amount of carrots and saffron was used the feathers might be produced. I did not agree with him, for so far as my observation extended, I had never found any feathers in either of those plants, and a careful examination with the microscope failed to reveal any. The actual test of the matter proved that I was correct, for however much of carrots and saffron was used the feathers were not forthcoming. We have concluded, for the present at least, to give up experimenting in that direction, and to raise only *summer* chickens. Without doubt, if hatching is deferred until the first of May, and the chickens housed during stormy weather, they can be raised without difficulty even if they have no feathers, and they can be killed for the early fall market.

"I think there will be a decided advantage gained in raising featherless chickens, on account of the vast amount of labor saved in picking them, for thus we shall be able successfully to compete with farmers who raise them the usual way. We can sell them much cheaper than they can, and still make a good profit.

"It may be a matter of curiosity to the editor of the *Leader* to know how the life giving principle is imparted to these eggs. The human mind is ever reaching forth and grasping for new knowledge. After the inventor of these eggs found that they would answer nearly all purposes for which eggs are used, he began a series of experiments to bring them to such a state of perfection that they would hatch. He studied Huxley, Darwin and many other writers on the origin of life, all in vain, and after spending much time and money in his researches and experiments he had nearly given up in despair, when he found a certain 'wily' professor who was an *as*tute scientist, remarkable for his wonderful attainments and profound scholarship. He also possessed the remarkable faculty of perpetrating 'scientific pleasantries' to a greater extent than any other man.

"Upon corresponding with this remarkable man, he learned that he also had been experimenting in the same direction, and had been successful; that he had actually fertilized the carrotic and albuminous substance of which these eggs are made, before it was placed in the shells, by subjecting it to a similar process to which fish-eggs are subjected in order to fertilize them. It was only after many trials that this 'wily' professor succeeded in accomplishing his object in a cleanly way, but at last his efforts were crowned with success.

"It is wonderful to read the Professor's discription of this experiment upon this albuminous and carrotic mass. He says 'that at the very beginning of the operation the carrotic and saffronic ingredients begin to separate from the albumen and assume the spheroidal form, and in a moments the whole mass has the same appearance that eggs obtained the usual way would have, if carefully broken and emptied from the shells into a vat. Immediately after the formation of the yolks, the lime particles commence uniting in the form of slender white rings which float on the surface of the albumen. These rings grow both upward and downward, but more rapidly downward, by attracting to themselves the particles of lime which are floating in the albumen; and much quicker than I can describe the operation, about two-thirds of the shells are formed, the lower ends being complete and containing a sufficient amount of albumen to float the yolks, which at this stage of the process, as if possessed of life, glide quickly over the edge of the shells and fall into the receptacle prepared for them. Immediately after this part of the operation is completed, the attraction of the shells for the particles of lime is transferred to their upper edge which grows rapidly until the perfect egg is formed. By a slight change in some of the manipulations, eggs can be made to differ somewhat in size.'

"A stock company has already been formed, a site purchased, and as soon as the weather will admit, a building will be erected, and the eggs manufactured on an extensive scale; we expect to employ about 500 hands in the operation. We have $2,000 worth of stock, the unsold part of which the editor of the Cleveland *Leader* can have at par. Without doubt there will be 'millions in it.'

POULTERER."

[We are astonished that such papers as the Cleveland *Leader* and Chicago *Advance* should give publicity to such fabrications, particularly the *Advance*, a religious paper of the Congregationalists. The author of the falsehoods about the manufacture of comb and filling and sealing it by machinery, in the *Advance*, is a clergyman, and one of the managers of that paper—one who ought to be above doing injury to an honorable pursuit, by giving publicity to such a slanderous *falsehood*. See page 67.—ED.]

For the American Bee Journal.

Things "New" and "Old," etc.

JAMES HEDDON.

I wish to publicly thank the Rev. W. F. Clarke for his article on page 37, containing so many kind expressions and plain and vigorous words. It is pleasant to know that there are those with whom we have entered the arena of sharp contest in our own search for truth who still remain our friends, ever willing to give honor to whom they think honor is due. I must also thank nearly a hundred honey-producers who have privately expressed nearly the same sentiments.

I wish to publicly correct a few misapprehensions which time and nervous strength forbid my doing by private letters.

I will say first, that the new hive is not a "small one," the brood-chamber being equal to that of the 10-frame Langstroth hive, when not intentionally contracted to one sectional-case, upon the system which I prefer, at the proper season.

2. I find its top surface (which is the same as the standard 8-frame Langstroth hive) ample for this locality, but it can quickly be increased to double that surface by placing the cases side by side.

3. It is not true, as many supposed, that the hive must necessarily be reversed or any of its parts inverted. In fact, the double-interchangeable brood-chamber system is the only one well adapted to secure most of the advantages gained by reversing.

4. It is a mistaken idea that this hive and system demand fall feeding for winter; on the contrary it is eminently adapted to wintering bees on natural stores, and that, too, of any preferred variety, and without any tedious manipulation; all of which is fully explained in my book.

5. Regarding the invention and patent: Several bee-keepers have written me that they have used substantially the same thing; full explanation, however, plainly revealed a mistake, and I predict that this will be repeated in every similar case.

I wish it understood that I do not claim the use of tightening-screws of all sorts, and adjusted in all manners; nor invertible, closed-end frames in all manner of adjustments; nor two-story brood-chambers of all kinds, any more than I claim an exclusive right to the use of wood, nails or paint in a bee-hive, simply because I use them in this one; but I do claim a certain number of arrangements which I consider the very best with which to construct a hive so that any frame can be reversed at will, or any number of frames may all be reversed together at will, without any addition or subtraction of parts or extra manipulation; so that we may accomplish the great bulk of necessary work by manipulating a number of frames at once, instead of singly; that we may cut out queen-cells or introduce the same; shake our bees nearly all clear from the combs with a single motion; find queens almost instantly; and many other useful manipulations which I will not repeat here; in fact my claims cover any hive mechanically *constructed like mine* in one or more of its essential features for the purposes specified. We discover principles, but we patent the mechanical arrangement by which these principles are applied; not in all their details, however.

While I have not endeavored to cover all methods of constructing one brood-chamber in two horizontal sections, the idea was original with me, being the outgrowth of a conception of an improved system of management. If it is worthless, it will fall, together with my opinions regarding it; but if it is what a trial of two seasons compels my students, Mr. Hutchinson and myself to believe, I shall rest content with the thought of being the first to systematize it, impress it upon the minds of my fellow bee-keepers, as well as putting it forth clothed in what I believe to be the best general mechanical construction, the minor details of which may change at any time, for this invention is confined to no particular size, shape or number of pieces.

Many letters received prompts the following words of caution: Do not hastily adopt this or any other improved hive, at a *sacrifice*. My colonies in improved Langstroth hives, on straight worker-combs (a majority with reversible frames) will not be transferred soon. The new hive will be adopted in my apiaries only as fast as increase and other changes in harmony with economy will warrant. This course I consider best for all.

Local Convention Directory.

1886. *Time and place of Meeting.*

Feb. 4.—Wisconsin State, at Madison, Wis.
Dr. J. W. Vance, Sec., Madison, Wis.

Feb. 11.—Rhode Island, at Providence, R. I.
Geo. A. Stockwell, Sec., Providence, R. I.

Feb. 16-18.—New York State, at Rochester, N. Y.
F. C. Benedict, Sec., Perry Centre, N. Y.

Feb. 17, 18.—Cedar Valley, at Laporte City, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Report for the Past Season.—W. K. Williams, Buffalo,+o N. Y., on Jan. 26, 1886, writes:

In the fall of 1885 I had 20 colonies packed with leaves in chaff hives. I lost 8 in wintering and sold 2, which left 10 to start the season with on May 1, from which I had a yield of 1,500 pounds of extracted honey (all white clover and basswood) besides enough left in the combs to feed up with in the spring; and I put 20 colonies into winter quarters last fall.

Snow-Storms in Kansas.—Nathan Davis, Wyckoff,o+ Kans., on Jan. 18, 1886, says:

My bees are wintering well on the summer stands. They stored some nice comb honey in one-pound sections last summer from sweet clover. They worked on it for 6 weeks. I also gathered a nice lot of seed from it, and I think that I will sow two acres next spring. We had the worst snow-storm on Jan. 7 that I have ever seen in Kansas; the mercury was as low as 16° to 18° below zero, and the loss of stock in western Kansas is very heavy, and a great many people were frozen to death.

Bee-Keeping in Nebraska.—Wm. F. Ware, (5—14), De Witt,o\ Nebr., on Jan. 22, 1886, says:

I agree with the Rev. G. T. Willis (page 41) that it does not pay to keep many bees in Nebraska; not so much on account of the scarcity of white clover, but on account of the poor honey market. Four years ago I commenced keeping bees, and the first two years I sold all of my extracted honey at 20 cents per pound; the next year at 15 cents per pound, and carried more than half of it until July. Thinking that perhaps comb honey would sell better than extracted, I worked my apiary for comb honey; but I find that it retails slowly at only 15 cents per pound in sections, and extracted at 10 cents per pound. During all the time I have not received $10 in cash, but took it out in goods at the store, allowing a commission of 10 to 15 per cent. for selling. I have tried to make it attractive by labels and packages. In the fall of 1884 I put 9 colonies in the cellar, and lost 4 in the spring, thus leaving 5, and 2 of them were very weak. During the summer I increased them to 14 strong colonies, and took 350 pounds of comb honey and 325 pounds of extracted. I have 150 sections of comb well drawn out for this year's work.

Report for 1885.—A. Eastman, Union,♂ Ills., on Jan. 26, 1886, says:

Noticing the report of Dr. Miller, page 44, showing such poor results, and as I live within 7 miles of his apiary, I thought I would report how I succeeded with my bees. I commenced the spring of 1885 with 16 colonies, 3 of which were so weak that it took all summer to build them up; so I had only 13 that I got any surplus from. I secured 400 pounds of comb honey in sections, increased my apiary to 24 colonies, and bought 4 more, so I now have 28 colonies in the cellar. They appear to be doing well in a temperature of 42°. I sold my honey at home for 15 cents per pound, and could have sold a great deal more.

Candy for Winter Feeding.—R. Metzler, Odessa, Ont., on Jan. 20, 1886, writes:

How can I make candy to feed my bees, for laying on the frames under the cushions, so that they will be disturbed as little as possible?

[Use 4 parts of coffee A sugar, and 1 part of water; simmer until it becomes quite hard on being cooled; mould it into frames of one-inch thickness, and lay it on the top of the frames, using sticks underneath ½ inch square, to give the bees free access to it, and the heat of the hive will keep it warm and soften it.—Ed.]

Reversible Hives, etc.—W. T. F. Petty, Pittsfield,+o Ills., on Jan. 23, 1886, writes:

I notice on page 35 that Mr. James Heddon has a new hive, with the brood-chamber in two sections. I made a hive 4 years ago, to be used in this way, and made 75 of them last year. I move my bees in the fall to the river bottom, 11 miles away, and with the shallow frame there is no danger of the combs breaking down. The deep hanging-frame has many disadvantages, such as being clogged with honey in the top part, etc. With the chamber in two parts the top can be taken off and the honey extracted from it, and placed below without having to handle all the brood. I use the same case to hold sections with section-holders. My frames rest on metal strips nailed to the bottom end of the case, projecting enough inside to catch the frame. I have also an improved section which I make by cutting grooves on the inside of the sides of the section, so a thin piece of wood can be slid in, thus making a box which protects the comb from injury and dampness; on the thin wood slides all necessary printing can be done. I have thought of sending one of my hives to the Bee Journal Museum, but I have neglected to do so. I will as soon as I can.

Extracted Honey vs. Comb Honey, etc.—Frank Wilcox, Mauston,⊙ Wis., says:

Have any of the bee-keeping fraternity demonstrated by carefully conducted experiments how much more extracted than comb honey can be produced? Comparing one apiary with another apiary will not decide it, because the pasturage will be different. Comparing 2 colonies apparently alike will prove nothing, because the yield might have been different had they been run for the same. Working a certain number of colonies for comb, and a certain number of other equally as good colonies for extracted honey, in the same apiary during the same season, and getting the average of each, spring count, is the only method that I can think of that will give results of any value. The comparative cost of labor, material, etc., is not required in this question. Another thought: By the laws of Wisconsin selling adulterated honey for pure honey is a criminal act. Words publicly charging a man with criminal acts are actionable, in suits of libel, I believe.

Very Cold Weather.—Emil J. Baxter, Nauvoo,+o Ills., on Jan. 15, 1886, says:

My 230 colonies of bees are wintering on the summer stands packed *a la* Dadant. We have had very cold weather lately—22° below zero. It is warmer now, and from all appearances my bees seem to have come through the recent cold spell all right.

A Woman's Experience.—Mrs. Sallie E. Sherman, of Salado,♀ Texas, gives the following as her experience with the use of Alley's drone and queen trap:

On March 14, 1884, my son and only child came home from College sick. His disease was typho-malarial fever, which lasted 72 days; during which time my bees increased from 20 to 48 colonies by natural swarming. Had it not been for two of the Alley drone and queen traps that I had, it would have been impossible for me to have secured half the swarms and at the same time nursed and taken care of my son. As it was, when a swarm began to come out, I put a cage at the entrance, and by the time I could get an empty hive in place with a few frames of brood from the parent colony in it, and the foundation all right, the bees would miss their queen and come back pell-mell in search of her, and thus enter the new hive at once. In about 20 minutes the bees were hived and went to work at once, without further trouble or ado, and I was back in the house with my son. In hiving them thus, I moved the old hive to a new location, and put the new one in its place, and let the queen run in with the bees. It was a beautiful sight to me to see my golden Italians come pouring in a stream, so to speak, from the top of a tall elm-tree into their new hive, without any climbing of trees or sawing of limbs, without disfiguring the symmetry and beauty of a favorite shade tree. I had no help, except a neighbor's little boy, who, after doing his chores at home, came over and remained a few hours in the middle of the day to watch the bees and tell me when they were swarming. I would about as soon think of going back to the old "gum" as doing without the drone and queen trap.

Mangroves Frozen in Florida.—W. S. Hart, Hawk's Park,⊙ Fla., on Jan. 18, 1886, says:

We have just had a frost (mercury down to 20° above zero) that has killed a large part of our mangroves. It would be well for those apiarists who contemplate starting for this region soon, to note that the conditions are somewhat changed here, for the present, in their line.

Bees Bringing in Pollen, etc.—Alderman & Roberts, Wewahitchka,⟍o Fla., on Jan. 19, 1886, write:

We have had the coldest winter known here for over 23 years. A great many bees are dead, but those that are living are having a good time now bringing in lots of pollen. We have about 1,000 colonies of bees, and expect a good flow of honey this season. The honey gathered here in the spring, in April and May, cannot be excelled in quality. The summer honey-flow is very good, but not as fine as that of the spring. The bloom from which the first quality is gathered, is from gum, and is in abundance along the Apalachicola and Chipola rivers. The average per colony here is 8 gallons.

The Early Part of Winter.—John Morris, Mauston,⊙ Wis., on Jan. 5, 1886, writes:

The past fall was a very mild one, with but very liitle rain indeed, so that the water in our wells was very low, and fall plowing was pretty dry work, whilst all high winds and rough weather avoided this section of the country. It can be imagined that we got along very nicely, and that every one expected an open or mild winter, which, of course, to a bee-keeper is very pleasant to anticipate. But the first week in December brought us up to the winter pitch, and we concluded once more to submit to the rigors of winter; yet in a few days thereafter it was as mild and fair as ever, excepting that we had a good body of snow on the ground. But a change came over all of this; the wind veered around into the north and it appeared as though the tropical regions had swung around to the arctic side of us to give us the same soft winds, mists and fogs, and now for the last eight or ten days it would rain a while, then it would snow a little, so that sleet and snow and rain was the order of the days until again we have 5 or 6 inches of snow and ice. In future years the first part of the winter of 1885-86 in Wisconsin, will not be spoken of as being cold or the coldest.

Severe Frosts in Florida.—Jesse Oren, Hawk's Park,⊙ Fla., on Jan. 14, 1886, writes:

We had severe frosts here on the nights of Jan. 10 and 11, forming ice 1¼ inches thick, and very seriously injuring the orange crop and stock. The mangroves are said to be destroyed, which causes the mercury of contentment to run very low among bee-men here. In February of 1835 the mercury sank to 7° at St. Augustine, making a clean sweep of all orange trees, mangroves and other semi-tropical trees. At this last freeze 18° above zero was the depression at New Smyrna, 3 miles north of Hawk's Park. Mr. Rudolph Sheldon, an old settler and a first-class bee-man here, says that the mercury fell to 18°, as observed by him, but that others had reported it 10° at New Smyrna. St. Augustine is 65 miles north of New Smyrna. I do not know anything about the depression at St. Augustine at this time, but if the mercury fell to 7° there in 1835, it may be near that this time. Mr. Sheldon says that he is going about 150 miles south of this place next week, to hunt up a locality where the mangroves may not be killed.

How I Began Bee-Keeping, etc.—Jacob Oswalt, Maximo,♂ O., on Jan. 25, 1886, writes:

I have been a careful reader of the AMERICAN BEE JOURNAL for the last 3 years, and I must say that I have received a vast amount of useful knowledge in bee-culture from the perusal of its pages. I have had just 5 years experience in bee-keeping. In the spring of 1881 I was among my maple trees cleaning snow out of the sap-crocks, and as I was passing along I discovered bees flying on the snow; from what our pioneer fathers used to say, I supposed that I was near a bee-tree. I looked around in the tops of several large trees, and discovered bees passing to and from the limb of a large elm tree, about 75 feet from the ground. In May I transferred the colony from the limb, without cutting the tree, and I call it my pet, or my first colony. In some future number I will describe how I transferred my first colony from the tree to the hive. I now have 20 colonies of hybrid bees all snugly tucked away in Falcon chaff-hives, and doing well, so far as I know. Last winter I wintered 9 colonies in chaff hives on the summer stands, without losing any, and last summer I increased them to 20.

Small *vs.* **Large Hives.**—Ch. Dadant, Hamilton,+o Ills., writes:

In closing our lengthy discussion on this subject, Mr. Hutchinson has given us victorious (?) arguments. I will cease to argue; but I will make a simple assertion, the correctness of which I leave the readers to judge. It is this: A method of bee-culture which forces all the honey into the surplus apartment, whether by contracting, reversing, or by using too small hives, or by all these methods together, and forces the apiarist to feed back his honey till the next crop, or till winter, and for winter—such a method, I say, will never suit the majority of the practical bee-keepers, who will always try to leave their bees enough honey for their wants, whenever practicable.

I thank Mr. Hutchinson for his compliment, on page 38, and for his courteous manner, as an apiarist; and I hope that our amicable dispute has been of some use to others.

Convention Notices.

☞ The annual meeting of the Rhode Island Bee-Keepers' Society will be held on Feb. 11, 1886, at Providence, R. I. GEO. A. STOCKWELL, *Sec.*

☞ The Cedar Valley Bee-Keepers' Association will hold its winter meeting at the City Hall in Laporte City, Iowa, on Feb. 17 and 18, 1886. Reduced rates are offered at the hotels. A very complete programme is prepared with ample time to discuss subjects of importance to bee-keepers. A cordial invitation is extended to all to be present.

H. E. HUBBARD, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The Seventeenth Annual Convention of the New York State Bee-Keepers' Association (formerly the Northeastern) will be held in Rochester, N. Y., on Feb. 16, 17 and 18, 1886. This will be one of the largest meetings ever held in the State. A large number of our most experienced bee-masters will take part in the discussions, and several essays will be read from a number of our most practical apiarists throughout the country. The programme is complete. If you are young in the work you can not afford to stay away—if older, you may give some good hints, if you get none. We want a good display of all kinds of supplies and fixtures. We have a room on purpose for exhibits, and any goods sent to the Secretary in care of the "National Hotel," Rochester, N. Y., will be placed on exhibition, and either sold or returned to the exhibitor, as directed. Reduced rates at the hotels have been secured, also rates on some of the railroads. All will have to pay full fare one way—return ticket at 1-3 fare by presenting certificate from the Secretary, who will furnish them on application. We want an active vice-president in every county in State. Please name one or send the name of some one, for your county.

F. C. BENEDICT, SEC.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

The NEW Heddon Hive.—We have made arrangements with the inventor, by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat. Further announcement will be made next week, giving prices, etc.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

◆

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

"**Don't Stop**"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

When renewing subscriptions please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

◆

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

A Brief History of the North American Bee-Keepers' Society, with a digest of its 15 Annual Conventions, and a full Report of the Proceedings of the 16th Annual Convention held at Detroit, Mich., on Dec. 8 to 10, 1885. This is the title of a new pamphlet of 64 pages just issued at this office. Price, 25 cents.

To compile this history and digest of all the past meetings of the Society, has taken much time and labor, and we have no doubt but that it will be duly appreciated by the apiarists of North America.

This pamphlet also contains engravings of the principal honey-plants, and portraits of the Rev. L. L. Langstroth, of Ohio, and Moses Quinby, of New York; two of the pioneers who helped to revolutionize American apiculture, and usher in a new era.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

◆

Agents can sell the Guide and Hand-Book like "hot-cakes." Send us an order for five copies (with $2.50) and we will send you the Weekly BEE JOURNAL *free* for a year. This is a *rare* opportunity to get the Weekly BEE JOURNAL without cost!!

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

All the Numbers from the beginning of the year are sent to new subscribers, unless otherwise ordered.

◆

The Guide and Hand-Book, is a book of ready reference and an encyclopædia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 64, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for $1.30

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and City and Country	2 00	1 50
New York Independent	4 00	3 30
American Agriculturist	2 50	2 25
American Poultry Journal	2 25	1 75
Journal of Carp Culture	1 50	1 40
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Apiary Register—100 colonies	2 25	2 00
Dzierzon's Bee-Book (cloth)	3 00	2 00
Dzierzon's Bee-Book (paper)	2 50	2 00
Quinby's New Bee-Keeping	2 50	2 25
Langstroth's Standard Work	3 00	2 75
Root's A B C of Bee-Culture	2 25	2 10
Alley's Queen-Rearing	2 50	2 25
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for $1.30.

◆

Any person not a subscriber, receiving a copy of this paper, will please consider it an invitation to become a subscriber to it.

◆

Cash in Advance is the rule, but no longer than six months of grace can be allowed on the small sum of $1.00. Subscriptions may commence at any time, and discontinuances may be ordered at any time, when arrearages are paid up.

◆

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Feb. 1, 1886. }

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 6@8c per lb.

BEESWAX.—24@26c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for honey continues dull, and prices are ruling lower ; however, if the cold weather continues, it may improve the trade in a short time. We quote as follows : Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9½@11c., and in unglassed 2-lbs., 11@12c. Buckwheat honey in 2-lb. sections, glassed, 9c.; in 1-lb. sections, glassed or unglassed, 10@11c. Extracted—white clover 6½@8c.; buckwheat, 5½@6½c.

BEESWAX.—Prime yellow, 26@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows :—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4@8c a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12@15c. per lb.

BEESWAX.—Good yellow is in good demand, and arrivals are fair, at 20@22c. per lb.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14@15c.; 2 lbs., 12@13c. Dark fall honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very fine extracted honey this week at 5c., and stocks continue to accumulate.

BEESWAX.—Scarce and higher—22@25c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote comb honey in 1-lb. sections at 14@16c., and 2-lb. sections at 12@14c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows : White to extra white comb, 10@12½c.; amber, 7@8c. Extracted, white liquid, 5¼@5½c.; light amber colored, 4½@4¾c.; amber and candied, 4½c.; dark and candied, 4@4¼c.

BEESWAX.—Quotable at 23@25c., wholesale.

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Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES**, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

BEE-HIVES, SECTIONS,

Foundation & Apiarian Supplies.

Having a large stock of sections on hand we will fill orders in Feb. at the following prices :

4¼x4¼, in lots of 500 to 4,000..(per 1,000), $5.00
" " 5,000 " 4.75
" " 8,000 " 4.50
" " 12,000 " 4.00
4¼x4¼, at same prices. All V-grooved.

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices.

For description and prices of the **SUCCESS HIVE**, send for Price-List. Estimates given on all other Hives.

QUEENS AND BEES FOR 1886.

We make a specialty of rearing the **ALBINO QUEENS AND BEES**. Price-List free.

S. VALENTINE & SON, Hagerstown, Md.
44Ctf

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo.
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1869. 1886.

Armstrong's Perfection

CROWN HIVE.

The brood-frames, honey-rack, and section-boxes are all **Reversible**.

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.

Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

(ESTABLISHED 1864.)

BEE-SUPPLIES. Wholesale and Retail.

We furnish EVERYTHING needed in the Apiary, of practical construction, and at the **lowest price**. Satisfaction guaranteed. Send your address on a Postal card, and we will send you our Illustrated Catalogue free. **E. KRETCHMER,**
5D12t COBURG, Montgomery Co., IOWA.

Italian Bees and Queens.

Having again located at Nappanee I will be better prepared than ever to furnish **BEES AND QUEENS**, the coming season, to my friends and customers, as I have a large Apiary of Syrian Bees in the South, and one of Pure Italians here to draw from. Send for Price-List.

Address, **I. R. GOOD,**
5C2t NAPPANEE, IND.

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The National Journal of Carp-Culture,
—ESTABLISHED IN 1885.—
(8-Page Monthly, Illustrated, 50 cents a year.)

The only Journal in the United States devoted to the interests of Carp-Culture. Sample free.

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Devoted to Physical, Mental, Moral, and General Self-Improvement, will be sent for the **THREE** next Three months free to any one who says where he saw this, and sends us his address, together with 10 cents to pay postage, etc. Remember that this **MONTHS** chance is not open long and should be accepted at once. We have secured a number of the most able contributors who will supply our colums during **FREE** 1886 with choice articles upon those all-important subjects. It is worth its weight in gold to everybody. Subscription price is only $1.00 per year. Agents wanted everywhere. Address,

M. S. WEBER, Pub.,
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BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

12,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25**. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
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☞ For sale also at the Office of the BEE JOURNAL, at wholesale or retail.

CEDAR FALLS APIARIES.

1,000 pounds of Bees for Sale.

	Apr.	May.	June.	July.	After
Carniolan Queens, tested, ...			$2.50	$2.25	$2.00
Italian Queens, tested, ...	3.50	3.00	2.50	2.00	1.80
Hybrid Bees, per pound,	1.50	1.25	1.00	.80	.60

Brood, per card, same as per pound of bees.

Empty Combs, on foundation and wired frames 16 cents each. Second-hand Langstroth hives, 75c. Untested Queens, half the prices of tested Queens. Newfoundland pups $10.00. Address,
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FOR SALE CHEAP!

96 ACRES, hill-land, ½ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1886. ALLEY'S 1886.

Combined Drone and Queen Trap.

A perfect non-swarming arrangement. Send and get them by the quantity, in the flat, and sell to your bee-keeping friends. Every bee-keeper will purchase one or more who examines them. Send for wholesale prices. Circulars free.

HENRY ALLEY & CO.,
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Bingham Smokers

AND

HONEY-KNIVES.

Send for Circulars.

Bingham & Hetherington,
ABRONIA, MICH.

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BEESWAX.

We pay **24c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

1886
GREGORY'S
SEED
CATALOGUE
1886

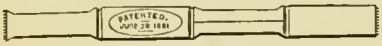
FAIR AND SQUARE DEALING.

Believing that if a man has dealt squarely with his fellow-men his patrons are his best advertisers, I invite all to make inquiry of the character of my seeds among over a million of Farmers, Gardeners and Planters who have used them during the past thirty years. Raising a large portion of the seed sold, (few seedsmen raise the seed they sell) I was the first seedsman in the United States to warrant (as per catalogue) their purity and freshness. My new Vegetable and Flower Seed Catalogue for 1886 will be sent **FREE** to all who write for it. Among an immense variety, my friends will find in it (and in none other) a new drumhead Cabbage, just about as early as Henderson's, but **nearly twice as large!** **James J. H. Gregory, Marblehead, Mass.**

SECTIONS CHEAPER THAN EVER.

THE "BOSS" ONE-PIECE

SECTIONS.



Patented June 28, 1881.

Bee-keepers will find it to their interest to send for our Price-List, just issued, before they order their sections for the season of 1886. We have our machinery in tip-top order, and can turn out more sections per hour than any other manufacturers in the United States; therefore we can fill orders on very short notice.

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., Jan. 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

BEE HIVES,

One-piece Sections, Section-Cases, Frames, &c., of superior workmanship.

SMITH & GOODELL,

Manufacturers and dealers in Apiarian Supplies and Barrel Churns. Send for price-list.

Rock Falls, Whiteside Co., Ills.
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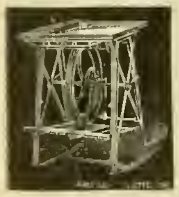
THE VICTOR HIVE

IS pronounced by competent apiarists to be the Best Hive for comb honey. It is operated on a new principle, the passage-ways being continuous through perforated zinc to the sections. Our dovetailed White Poplar Sections, with or without side passages, cannot be excelled in accuracy or smoothness. They are as nearly perfect as can be made. Sample of the new sections for 2 one-cent stamps. Catalogue on application.

Address, **DR. G. L. TINKER,**
3Dtf NEW PHILADELPHIA, OHIO.

BARNES' FOOT-POWER MACHINERY.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 484 Ruby St., Rockford, Ill.

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For the manufacture of

Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

1886. ITALIAN QUEENS. 1886.

6 Warranted Queens for $5.

Write for circular. No circulars sent this year unless called for. **J. T. WILSON,**
3Ctf NICHOLASVILLE, Jessamine Co., KY.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS of the **BRISTOL Bee-Hive**, the Standard Hive of Vermont, **Section Honey-Boxes**, all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers**, Shipping **Crates**, Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for illustrated Catalogue and Price-List. 46D12t

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THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

J. M. SHUCK,
DES MOINES, IOWA.
10Aly

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to

CHAS. F. MUTH & SON,
Freeman & Central Ave.. - CINCINNATI, O.

P.S.—Send 10c. for Practical Hints to Bee-Keepers

Bee-Hives and Bee-Supplies,

QUEENS AND NUCLEI.

WE are now ready to fill all orders promptly, at low prices, and guarantee our goods. Send for Price-List free.

B. J. MILLER & CO.,
2D6t NAPPANEE, IND.

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THE **GIVEN PRESS** stands in the front rank for manufacturing **FOUNDATION** in **Wired Frames**, as well as foundation for **SECTIONS**. Without a dissenting voice, all of our customers affirm its superiority.

Send for Circular and Samples.

J. R. CALDWELL & CO.,
1ABtf HOOPESTON, Vermillion Co., ILL.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

G. B. LEWIS & CO.
51Atf. **WATERTOWN, WIS.**

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

THE BRITISH BEE JOURNAL

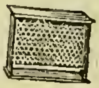
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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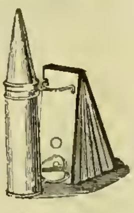
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.



Bee-keepers' Supplies,

Standard Langstroth,

Quinby Standing-Frame,

And all other kinds of **Hives**,
MADE TO ORDER.

Quinby Smoker a specialty.

I shall supply anything you need in the Apiary. Send for Illustrated Price List.

W. E. CLARK, successor to L. C. Root,
7Aly ORISKANY, Oneida County, N. Y.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
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SALARY

of $90 a month and Expenses paid agents everywhere to travel and sell staple goods to dealers, or **$40** a month & expenses to distribute circulars in your vicinity. All expenses advanced, salary promptly paid. Sample package of our goods and full particulars **FREE.** Send **8 cents** for postage, packing, etc. We mean what we say.

NATIONAL SUPPLY COMPANY,
Palace Building, Cincinnati, Ohio.

WANTED.—Two young men to work with bees. Three hundred colonies—27 years' experience. Address, **S. I. FREEBORN,**
4Atf ITHACA, WIS.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Feb. 10, 1886. No. 6.

Mr. John Peacock, of Chicago, Ills., an enthusiastic bee-keeper, was run down by a train on Sunday, Jan. 31, and killed. He was buried on Thursday last, and was over 78 years of age.

◆

The Honey Crop for San Diego County, Calif., for 1885, is reported thus: Comb honey, 1,107,000 pounds; extracted, 1,284,500; total, 2,177,500 pounds. This is equal to 1,088 tons, or over 100 carloads of honey. At 8 cents per pound it is worth over $178,000.

◆

G. M. Doolittle, Borodino, N. Y., writes: "I look forward with pleasure to every Thursday night when the AMERICAN BEE JOURNAL arrives,' fresh and newsy,' and just as regularly as the day comes. I do not know but there *could* be a better Bee Journal gotten up, than the one you publish, but so far, *there never has been.*"

◆

New Price-Lists have been received from the following persons:

Cole Brothers, Pella, Iowa.—40 pages—Flower, Vegetable, and Garden Seeds.

Dr. J. P. H. Brown, Augusta, Ga.—20 pages—Italian Bees, Queens, and Apiarian Supplies.

Earle Clickenger, Columbus, O.—1 page—Bee-Supplies.

Wm. Groff, Rome, N. Y.—4 pages—Common-Sense Bee-Hives.

F. A. Salisbury, Geddes, N. Y.—28 pages—Queens, Apiarian Implements and Supplies.

J. B. Mason & Sons, Mechanic Falls, Maine.—50 pages—Bees, Queens, and Apiarian Supplies.

A, C. Nellis & Co., Canajoharie, N. Y.—100 pages—Flower, Field, and Garden Seeds.

Berlin Fruit-Box Co., Berlin Heights, O.—16 pages—Berry Packages and Apiarian Supplies.

Thomas G. Newman & Son, Chicago, Ills.—36 pages—Bee-Keepers' Supplies.

A. A. Abbott, Morenci, Mich.—16 pages—Plants, Seeds, etc.

Any one desiring a copy of either of them, can do so by sending a postal card to the address as given above.

Adulterated Food.—The Illinois State Board of Agriculture, after a prolonged discussion, has adopted the following resolutions:

> *Resolved,* That we respectfully request Congress to enact a law placing all dairy products and all imitations of or substitutes for the same, under the control of a competent Government inspector, to the end that such articles shall be branded and sold under their proper names and on their merits.
>
> *Resolved,* That we respectfully direct the attention of Congress to the unwholesome adulteration of other food products, and pray for proper legislation for the adequate protection of the people from the same.

The recent Iowa State Dairy Convention at Oskaloosa, appointed persons to secure, in every county, signers to a petition to the General Assembly requesting that body:

> 1. To prohibit by law the sale as butter or cheese of any substance not the unadulterated product of pure milk or cream.
> 2. To enact suitable penalties for the violation thereof.
> 3. To appoint a dairy commissioner for Iowa, charged with the enforcement of the law, and appropriate ample funds for this purpose.

Now add honey, and all other articles of food which are so often adulterated, and let Congress prepare to defend the whole people of the United States against the nefarious schemes of adulterators. Things have been so lax, that now there is hardly an article of human food which escapes the manipulation of these adulterating scoundrels. The "whipping-post" and "pillory" are the most appropriate punishments for adulterators.

◆

Mr. Gustav Bohn, who was sued by fruit-growing neighbors in California for damage said to be done to raisins by his bees, and fined $75 therefor, is preparing to appeal the case, under the direction of the National Bee-Keepers' Union. The appeal is set for next month. Mr. Bohn writes as follows about his position in the premises:

> If this suit goes against us, bees cannot be kept in the State, as all that will be needed is for some one to set out some grapes, and bee-keepers must move. I had my bees in there present location before my neighbors had their grape-vines set out. I purchased the place from a bee-keeper, who kept bees on it before me. I am located at the foot of the last range of mountains this side of the desert, so all will see that I have not moved my bees here to feed on my neighbors' fruit, as was testified to by some of them who grow fruit, one of them having grape-vines in the nursery for sale by the hundred thousand, and one having five times the number of acres set to grapes as the plaintiffs, and but one mile from me. Those are some of my witnesses.

◆

The Statistics reported at the Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Convention, held at Meadville, Pa., Jan. 20 and 21, 1886, were as follows:

Number of colonies fall of 1884	3,371
" " spring of 1885	1,838
" pounds of comb honey, 1885	48,890
" " extracted honey, 1885	12,240
" " beeswax, 1885	488

◆

The National Agricultural and Dairy Conventions, under the auspices of the American Agricultural Association at the Grand Central Hotel, New York, Feb. 16, 17 and 18, should be attended by all interested in agriculture and dairying.

Dr. J. W. Vance, of Madison, Wis., has sent us the following resolutions, which were unanimously passed at the Wisconsin State Bee-Keepers' Association, on Feb. 4, 1886, on home markets for honey:

> *Resolved,* That the bee-keepers of this State endeavor as far as possible to create a home market for their honey, so that there will be no need of seeking city markets in which to dispose of our surplus products.
>
> *Resolved,* That we thank Mr. T. G. Newman, of Chicago, for his efforts in securing reduced rates of transportation on honey, and congratulate him upon his success.
>
> *Resolved,* That we desire to express to Mr. Newman our sincere appreciation of his labor and zeal in fighting the glucose adulterators, and bringing to light their nefarious schemes against the interests of bee-keepers.
>
> *Resolved,* That the bee-keepers of the State are urged to make more creditable exhibits at the next State Fair.

◆

Mr. F. L. Dougherty, in the *Indiana Farmer*, remarks as follows:

> A thorough system of management is as necessary in bee-keeping as in any other business. A hap-hazzard way of doing things will never win any but meager returns. He who looks ahead and prepares for his work before the time for the work to be done, will find the result far exceeding those of the one who waits until the work needs to be done, and then has to hurry in the vain endeavor to catch up.

This is excellent advice. If system is necessary anywhere, it surely is so in the apiary, and no one should expect success without it. Be in time; get everything you need for the honey crop on hand in good time, and keep everything in order. You will thus have your tub "right side up" when the honey-flow comes.

◆

The Bee is a Granger, says the Detroit *Free Press*, "and started the first co-operative store; established the first savings bank, and organized the first mutual-aid association." What next?

◆

A Brief History of the North American Bee-Keepers' Society, with a digest of its 15 Annual Conventions, and a full Report of the Proceedings of the 16th Annual Convention held at Detroit, Mich., on Dec. 8 to 10, 1885. This is the title of a new pamphlet of 64 pages just issued at this office. Price, 25 cents.

This pamphlet also contains engravings of the principal honey-plants, and portraits of the Rev. L. L. Langstroth, of Ohio, and Moses Quinby, of New York; two of the pioneers who helped to revolutionize American apiculture, and usher in a new era.

◆

One of the Results of publishing, in pamphlet form, the proceedings of the North American Bee-Keepers' Society, is that hundreds of papers are now publishing condensed portions on each of the subjects upon which addresses were given followed by discussion. This will probably continue during the whole year, more or less, in many agricultural and other papers, and people in general will become better informed on the pursuit of honey-production. This may help to counteract the falsehoods promulgated by *ignorant* scribblers in many of the newspapers at the present time.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Keeping Bees on Shares.

Query, No. 192.—What portion of the honey produced would be a fair compensation to the renter of an apiary, supposing that I should furnish the bees, empty hives, frames, foundation, sections and crates in the flat, kegs for extracted honey, and retain the ownership of all the bees and fixtures, my share of the honey to be delivered to me [at the apiary] crated, or in kegs?—C. B. F., Mich.

One-third.—G. L. Tinker.

One-half, less one-half the cost of foundation, sections, crates and kegs.—W. Z. Hutchinson.

One-half, if the bees are located on the renter's land, and he has to hive the swarms free of charge.—Dadant & Son.

It would depend upon the size of the apiary, and how much time the renter put in; but I will say one-half of all the honey.—H. D. Cutting.

I should say three-fifths, and perhaps two-thirds. It is usual for the person renting to pay one-half of all the expense, and receive one-half of the honey produced.—A. J. Cook.

When I used to keep bees in that way, I received one-half the honey as pay for my work. I furnished one-half of the sections and crates actually filled, however.—G. M. Doolittle.

About one-third, or a little more. If you would furnish everything except what is sold with the crop (crates, sections, and surplus foundation), and that furnished equally by both parties, the surplus honey might be divided equally, the increase always remaining with the apiary.—James Heddon.

One-third of the honey produced would be about right, taking all things into consideration. This would be large wages for simply working the apiary, considering that the renter is furnished with everything, including the sections, kegs, etc., to hold his own part of the crop, were it not that he must take the greater risk as to what the honey harvest may or may not be, and must leave enough honey to winter the bees.—G. W. Demaree.

Several more factors are needed to make this conundrum complete—the number of colonies, condition of honey-yield (whether large or small), etc., are required before I can solve it. If by portion, proportion even is meant, I am but little better off, as so much will depend upon the quantity of honey produced, and the amount of work actually done to produce it; but I would say ordinarily from ⅓ to ½, with a proportion of the increase of bees.—J. E. Pond, Jr.

Catching Prime Swarms.

Query, No. 193.—Will the following plan work all right in catching swarms? When a swarm is coming out, go to the hive with a screen something like those used over butter-dishes, etc., to keep flies off; watch for the queen, and when she comes forth, gently place the screen over her, and as the swarm is nearly or all out, remove the hive, placing another in its place, and when the bees return, liberate the queen. I mean prime swarms.—J. K., Iowa.

I think that the plan has been successfully practiced by a great many.—C. C. Miller.

Yes, sir, a similar plan has invariably succeeded for years in our College Apiary.—A. J. Cook.

Yes, as a rule. If the queen is kept caged until nearly all the bees are in the new hive, you will have less trouble with the plan.—G. M. Doolittle.

The plan will work if you can catch the queen. Sometimes you will see her in the headlong rush, but oftener not, especially if the entrance is large.—G. L. Tinker.

Yes, but when the swarm returns, it is not always safe to liberate the queen, as she may fly away then. If you liberate her, keep an eye on her, and if she tries to leave, keep her caged in the new hive for a few hours.—Dadant & Son.

Yes, the plan will work all right if you can capture the queen; but it is a good deal like "catching the bird by sprinkling salt on its tail." You cannot capture the queen with any certainty in that way.—G. W. Demaree.

It will depend upon how much wing-power your queen has. If you are on hand with you butter-dish (excuse me, I mean "screen"), and can put it over her, your plan will work all right if the queen goes in with the swarm.—H. D. Cutting.

I cannot see that this plan differs (except in the manner of caging the queen), from the plan usually adopted with queens whose wings are clipped; and I think it would be as successful as such methods usually are.—W. Z. Hutchinson.

The old recipe given for a rabbit-stew is, "first catch your rabbit." If you are present with the screen or any sort of a queen-cage, and can catch and confine the queen, the bees will come back to her and swarm into a new hive placed on the old stand. The only trouble is in first catching the queen, which, in a large apiary, is a big job to do every time that a colony swarms.—J. E. Pond, Jr.

When you are on hand, implements handy, swarms prime, with little liability of several being in the air at once, the above plan often aids despatch. Use the smallest size of butter-dish screens. I have been aided much by also having a frame about 3 feet square, covered with wire-cloth, which I placed close up in front of the hive when the issuing began, and forced nearly all the bees to travel up, as they departed, thus multiplying the chances to observe the queen. Now suppose this wire-cloth was worker-passing and queen-excluding on a frame that was a partial box.—James Heddon.

Destroying Queen-Cells.

Query, No. 194.—Will an old queen destroy the queen-cells of her parent colony, or any others, when both colonies—the old and the young one—are again united in 6 or 7 days after swarming? How will the bees of the parent colony act towards the queen, when there is no alternate mixing of combs and bees?—F. L., Mo.

I should consider it somewhat "risky."—G. M. Doolittle.

I have never tried such an experiment, but I feel very certain that the old queen would be killed.—G. L. Tinker.

No positive answer can be given—sometimes yes, as often no. The uniting will probably be possible, as it is easy to unite bees at swarming time.—A. J. Cook.

The queen will destroy all queen-cells that the bees allow her to reach. The behavior of the bees toward one another will depend much upon the condition of the harvest—hostile during a bad honey yield, peaceable in a good yield.—Dadant & Son.

1. In some cases the bees (hardly the queen) might destroy the queen-cells; oftener I think they would swarm. 2. Generally, I should expect the queen to be treated kindly.—C. C. Miller.

I have never tried this, but I think that the old queen would destroy cells, and that she would not usually be molested; but I would not advise such a procedure.—W. Z. Hutchinson.

1. No one can tell what she will do in such a case; sometimes she will, and at other times she wont. The only way to determine is to try it. 2. If a queen has been kept out of a colony for a day or more, the bees of that colony ordinarily look upon her as a stranger, and therefore the same care should be taken in putting her back, as in introducing a perfectly strange queen.—J. E. Pond, Jr.

She would, if the bees would permit her to have her own way, but if the swarming-impulse is as strong as it usually is, the bees will either "ball" the old queen and kill her, or force her to go with a swarm.—G. W. Demaree.

You will find great variance, owing to location and seasons. Here they act differently at different times. With me it has been unvarying, that none of the bees quarrelled after such re-uniting. No queens were injured. Usually the swarm would sulk or re-issue, and I prefer the latter of the two evils.—James Heddon.

Finding the Queen.

Query, No. 195.—I have read of so many different operations with bees, where it is necessary to find the queen, that I write my experience and ask for a remedy for my troubles. I first smoke my bees, then open the hive, take out a frame, look it over carefully, and lay it down outside the hive, and proceed with the other frames in like manner; then the inside of the hive will be filled in the corners, on the bottom and on the sides with a horde of bees, all excited and in motion. By this time the bees outside will have recovered from the effects of the smoke, and are ready to sting and fly about in the air, making a complete confusion of the whole job; and the result is I do not find the queen.—E. A. S.

I do not smoke the bees so as to get them to running; if you do, you will always have trouble in finding the queen. Go slowly and carefully, not exciting the bees, and you will succeed better.—G. M. DOOLITTLE.

Take out the central combs first, examine them *quickly*—learn to tell by one sweeping glance whether the queen is on one side of a comb. Find the queen *before* the bees get to running all over. When a comb has been examined, place it in an empty hive.—W. Z. HUTCHINSON.

To keep them quiet keep up the smoke. When we find trouble in seeing the queen, it is often an aid to shake all the bees in front of a hive, on a board. This often saves time, and is quite sure. Shaking bees from frames seems to take the fight out of them.—A. J. COOK.

Have you carefully studied directions in the bee-books? If not, one of the first things is to commence a library. I suspect that you use too much smoke, as very little is needed—a couple of puffs at the entrance before touching the hive, and 3 or 4 across the top after uncovering it. With good-natured bees in a honey-flow, no smoke may be necessary.—C. C. MILLER.

If I want to find a queen in any hive very quickly, I would not smoke the bees. The queen is nearly always found on the combs containing the brood, and on the brood itself, not on the sealed honey. If the bees are vicious, I would put on gloves and protect my face. If not smoked, the queen seldom leaves the combs on opening a hive.—G. L. TINKER.

It is plain that you lack practice, and that your bees are not pure Italians. The best *chance* to find a black queen is to lift a centre comb first, for she may be on it and will not have time to run off as she does when you start at the side, where she is less likely to be. Seek for her on the *brood-combs*. When your bees get confused, give them a good smoking, remove their hive, and shake them all on a sheet in front of an empty hive on the stand of their own. If you do not find the queen then, you had better quit hunting for queens.—DADANT & SON.

When no robbing is imminent, I have hunted queens in the same manner. If you and your bees are "fidgity" you may not find the queen till what you describe, results. You can drive the queen and part of the bees above into a box, and then shake them upon a board, and find her thus. This method is also uncertain and slow. With my hive I shake the queen out at once, without removing a frame.—JAMES HEDDON.

Take out one frame, look it over carefully, then hang it outside of the hive, or inside of an empty hive. Take the next frame, look it over, and if no queen is found upon it, put it back into the hive, to one side, and go on until you do find her. You will have less trouble if you leave the frames inside of the hive. If you do not find her, go back over the frames. In looking up queens, I find the less smoke you use the easier to find them.—H. D. CUTTING.

There is no remedy. The only way to find a queen, is to hunt her up. If you cannot find her readily on the first trial, close the hive, wait an hour or so, and try again. You can if you like, shake all the bees from their combs in front of the hive, and brush out all the bees, and then pick out the queen when all are traveling back; this, however, is a tedious job, and I prefer the second trial. It is seldom, though, that I do not find the queen at the first attempt.—J. E. POND, JR.

Your experience is not peculiar; all beginners meet with the same difficulties that you mention. Use a comb-box large enough to hold a full set of combs, or an empty hive will do. Open the hive and use no more smoke than is absolutely necessary to keep the bees quiet. Remove the combs one at a time, and look them over, placing them in the comb-box till all have been examined. If the queen is not found, examine among the bees left in the hive, stirring them with a stick. If still not found, go over them again when replacing them in the hive. "Practice makes perfect."—G. W. DEMAREE.

Hive-Entrances in Winter.

Query, No. 196.—In covering hives with outside boxes for wintering bees on the summer stands, how should the entrances be arranged to prevent their being clogged with snow, in regions where *very* heavy snows fall?—H. C. P.

Make your cover-box with a *deep portico*.—DADANT & SON.

The entrances should be protected by wide boards in front of them.—G. L. TINKER.

Stand a board up in front of the entrance, so the snow will not drift in.—H. D. CUTTING.

I stand a board from the alighting-board slanting to the hive, so as to protect the entrance from snow.—G. M. DOOLITTLE.

I have no experience of late years, but would not boards leaned against the hives accomplish it?—C. C. MILLER.

Lean a board up against the hive in front of the entrance, and fill the openings at the ends of the board with straw.—W. Z. HUTCHINSON.

Snow never injures my bees by drifting at the entrances of the hives. A broad board set up against the front of the hive would remedy the evil effects, if there was any to be feared.—G. W. DEMAREE.

A slanting board can be placed against the hive. If this is as long as the hive, and pretty close to the entrance, it will serve the purpose well. If snow is cleaned out as soon as the weather warms up, it is a question if it does any harm.—A. J. COOK.

It will make little difference whether they are so protected or not. If desired, a board can be set slantwise over the entrance, but I have never found that snow clogging entrances caused any injury, as it is porous enough to give ample ventilation.—J. E. POND, JR.

To prevent clogging with snow and other vastly more important and detrimental influences, allow me to advise leaning a board up over the front of the hive, and piling all the snow over the hive, board, and all that you can find. Cover them from sight, if you have enough snow, and keep them so as much as possible.—JAMES HEDDON.

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CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ○→ east; ←○ west; and this ♂ northeast; ↖○ northwest; ○↘ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

Lengthening the Swarming-Impulse.

17—G. M. DOOLITTLE, (40–95).

By reading the answers to Query, No. 173, on page 820, I notice that the lengthening of the swarming-impulse, so as to get more queens reared, is stated by some to be an advertising "trick of the trade." Some of the replies appear a little uncharitable and uncourteous, to say the least, and as I am one of those who have advertised queens reared under the swarming-impulse, I wish to say a few words on the subject, in addition to what I said on page 820, of the BEE JOURNAL for 1885.

If any person entertains the idea that the swarming-impulse is to be commenced at will, on the first day of April, and closed on the last day of October, I will simply say that I know of no plan of doing such a feat; but I do know how to get bees to swarm 2 weeks in advance of the time they otherwise would, and keep them swarming from a month to 6 weeks later, each varying of course according to the season. So it occurs that I have had prime swarms as early as May 18, and as late as Sept. 3, although the average will be from June 10 to Aug. 20. As I keep no secrets from the readers of the AMERICAN BEE JOURNAL, I will tell them how it is done; but first I wish to explain why I consider queens reared under the swarming-impulse superior to those reared by the erroneously-called "artificial process."

1. The bees will not thus rear queens until all the conditions for queen-rearing are favorable; while with that method they are obliged to rear queens at the will of the bee-keeper, often under the most unfavorable conditions.

2. The queen-larva is so abundantly fed that a thrifty growth is obtained, thus giving great vigor; while by the so-called "artificial" method the queen-larva is often insufficiently fed, thus dwarfing the queen's capacity as an egg-layer. I have never cut open a queen-cell produced under the swarming-impulse but what I found a lump of royal jelly left nearly as large as a pea; while I have cut scores of queen-cells produced otherwise that did not have enough left in them so as to detect a particle of royal jelly.

3. My queens reared under the swarming-impulse, and those so reared that are purchased of others, have lived to be 3, 4, and some even 5 years of age, doing good business all those years; while I have never purchased but one "dollar" queen that lived 2 years, and three-fourths of them never lived over 1 year.

Now as to how I manage: In the latter part of April I select colonies having such queens as I wish to breed from, which, as a rule, I know where to find from the fall previous; and when thus selected I use every known means to advance them as fast as possible. I formerly depended upon giving these colonies frames of hatching brood, but for the past 2 seasons I have used the plan of giving caged bees, with better results. I take a cage, and from each of a number of colonies I get a pint or so of bees, until I have as many as I wish, when the cage is placed in the cellar until nearly dark; it is then brought out and placed over the selected colony in such a way that the bees can run down with the colony during the night through a hole in the quilt. In this way the colony is materially strengthened without the danger of chilling any brood. I treat only 1 or 2 colonies in this way, depending on the usual means to get the majority of them ready to swarm a little later on; but I do get these one or two to swarm two or more weeks in advance of the rest.

Next, as it comes toward the close of the swarming season, I cage the queen and hang her with the swarm having just issued, so as to keep them out as long as I desire, and be secure from their leaving for the woods, when from other colonies I get frames of hatching brood so as to fill the hive into which the swarm is put. If no honey is coming in from the field, they are fed liberally, which results in the hive being crowded with bees and stores so that in from 12 to 18 days I get another swarm from this prime swarm. This I practice only when I do not have enough queens on hand reared when the bees swarm without coaxing to supply the estimated demand. All queens are kept which are reared from the best colonies during the general swarming in the last of June and July, so as to save this expensive coaxing and feeding, so that I often send out queens in September and October that were of this sort.

Another item: I manage to get nearly double the queen-cells built by these coaxed colonies that I do ordinarily. To do this, I proceed as follows: When I think that they will be about starting queen-cells, I take a frame of drone-comb (or partly such) and cut three strips out of it about 1½ inches wide, one at the bottom, one in the middle, and one near the top. Previous to this I have saved some queen-cups or embryo queen-cells, as I came across them in my work with the bees. These cups are stuck to the upper part of the comb where the strips were cut out, by means of melted wax, when this frame is hung in the centre of the colony coaxed. The bees seem to think that they have started these queen-cups themselves, so that I have in a few days from 20 to 30 nice queen-cells instead of from 5 to 10 as I ordinarily would.

When the colony swarms, a part of the swarm is returned so as to protect the queen-cells from any injury from cold, and if the swarm is very early in the season, the queen is taken from them and all the bees allowed to go back. If really good queens are to be reared in the hive of the parent colony, do not move this hive from the old stand, so as to hive the new colony on the old stand, as there is danger of chilling the queens in the cells.

I have now described how I proceed to secure queens which give me great satisfaction, and this method is no "trick of the trade" with me.

Borodino, ⊙ N. Y.

For the American Bee Journal.

Feeding Sugar for Winter Stores.

J. G. HARLAN, (17—32).

Allow me to join with those who have already spoken against the extensive sugar-syrup feeding. It is very obvious why this universal feeding of sugar syrup will cause still farther decline in the honey market. It will throw hundreds of thousands of pounds more honey on the market, and that kind, too, that does more to cause low prices than almost anything else; by this I refer to dark extracted, honey in bulged combs, broken sections, and sections not completed. Now this unsalable honey is just as good for spring, summer or winter stores as any sugar syrup; at least it has proved so with me.

This practice is also causing much distrust both among dealers and consumers, they strongly suspecting that all the honey offered, especially by large honey-producers, is more or less composed of sugar; and indeed they have some ground for their suspicions. I would make this suggestion: Put no honey on the market but the very nicest, and in the most attractive form. Do not be in too great haste to sell. Keep honey the year round for your home trade. Work the home market as though it was the only one you knew of. Do not cut on prices. Dealers in your own town can afford to pay a cent or two more per pound to have honey laid down in their stores, than to have it shipped from a distance, and paying freight and drayage. I know of honey being shipped from this county to the New York market, last fall; and I also know of a groceryman in this town that had honey shipped, this winter, from New York here, for his trade. This illustrates the point. Now let those who do the most writing for our bee-papers, take this matter up and give their advice to us who are in the habit of looking to them for advice.

Yet, in justice to the bee-keeping interest, I will say that in seasons like the year 1880, when the late-gathered honey is very bad, we will have to extract and feed sugar, or lose our bees; but such seasons do not come very often.

My number of colonies is 32, in chaff hives, one being in the cellar; number last spring, 17; number of pounds of comb honey in one-pound boxes, 1,200; number of pounds of extracted honey, 250. I sold all of my honey at home. By the way, I think that I have the best and most convenient chaff hive made.

Union City,⊶ Ind.

For the American Bee Journal.

The Oneida County Convention.

A number of the most enterprising bee-keepers of Oneida County, N. Y., met at Rome, N. Y., on Nov. 21, 1885, and organized under the name of "The Oneida County Bee-Keepers' Association," adopted a constitution and by-laws, and elected the following as officers for the ensuing year: President, R. Bacon, of Verona; Vice-President, W. E. Clark, of Oriskany; Secretary, O. J. Evans, of Camroden; and Treasurer, J. M. Resequie, of Verona. Seventeen bee-keepers became members of the Association, and if the weather had been favorable, many more would have been present.

After the usual amount of routine work, which is indispensable in setting a new society on a solid footing, the subject of "Wintering bees" was discussed as follows:

Pres. Bacon—Much depends upon locality and hives, and the winters have something to do with it. Bees may be treated in the same manner two winters—the first winter perhaps they will do well, and the next very poorly. We should strike the middle line after getting all available information. Bees should be prepared for the winter, dry and carefully; they must not be shaken up. Some cellars will do for wintering bees, while in other cellars they will not do well. I cannot keep mine in my cellar. I have a frost-proof bee-house which is made double-walled, the studding being about 8 inches, boarded outside and inside, and the space of 8 inches filled with dry earth. On the outside of this again is nailed studding 2 inches thick, on which are nailed matched siding, thus leaving a dead-air space of 2 inches between the siding and the inner wall, and the top is covered with dry sawdust. I prefer to keep the temperature of my bee-house about 45°. My colonies do not consume more than from 5 to 10 pounds of honey each, in winter. My bee-house more than pays for itself every season. On pleasant winter days I give my bees a flight, and I find that they come out better in the spring than when they are not allowed to have flights.

W. E. Clark—I copied my bee-house after Mr. Bacon's, but got it so as to be a little too warm in the spring. I do not wish to put my bees out till the soft maple blossoms in the spring. I therefore sunk my bee-house about 4 feet into the ground, and found that the bees would remain more quiet in the spring. I had no ventilation at the bottom of the bee-house last winter, and my bees never wintered better. If a bee-house has damp air in it, it should be ventilated. I elevate the lower tier of hives about an inch from the bottom-board. This arrangement, by admitting a free circulation of air through the hive, prevents the accumulation of mold in the hive and on the bottom-board, which would otherwise occur. The next tier is elevated about half an inch, while the upper ones need no more ventilation than the ordinary entrance. As to absorbents on the top of the hive, I use old quilts which are cut to the right size and laid on the top of the hives. Last winter I put 10 colonies in with just the honey-board on top, and those wintered as well as any. I have also packed some with dry sawdust on the top *a la* Mr. Bacon; but so far as packing on the top of the hive is concerned, I find but very little if any difference. I have never tested chaff hives, but bees cannot winter as well in them as in a bee-house. I keep the temperature in my bee-house from 45° to 48°. The great object is to keep the temperature even.

The convention adjourned to meet at Stanwix Hall, in Rome, N. Y., on Feb. 24, 1886, at 10 a.m.

O. J. EVANS, *Sec.*

For the American Bee Journal.

The Hibernation of Bees.

PROF. A. J. COOK.

I did not intend to say more on this topic, but the well being of science, and our industry as well, makes it the duty of some one to speak; and as no other one may find time, I again take my pen.

Brother Clarke amuses me. All will remember the old story of the shrewd farmer who said to his neighbor lawyer: "Friend, my bull has razed your fence and gored your ox to death. What ought to be done?" "Why," said the lawyer, "the case is plain—you must pay for the ox." "Oh!" said the farmer, "my inexperienced, clumsy tongue has blundered. It was your bull that gored, and my ox is dead. "Oh!" said the lawyer, "that alters the case materially."

I pronounced against Bro. Clarke's theory which he first built wholly, if I mistake not, upon the statement that bees in trees in the forest do not die—which, by the way, is not at all true in Michigan. I have received a pretty severe blast of adjectives—in truth, as severe a word-flagellation as a kind-hearted, orthodox clergyman in good and regular standing would dare to give. Dr. Tinker speaks for the Dominie's pet, and as positively as I ever did, and there is no such words as "contemptuous dogmatism," but that same gust of rapturous enthusiasm which always wells forth when Bro. Clarke speaks, and which took the Detroit assembly fairly off its feet. This time the other "ox is gored." Well, it is all right; we all enjoy Bro. Clarke's enthusiasm and his charming periods, if we do not always respect as fully his opinions and theories.

More than once I have gone over the same ground that Dr. Tinker has, and have no fault to find with his admirable experiments, nor the facts which he draws from them—they are substantially the same that I have obtained. But when this winter-quiet of bees is termed "hibernation," then I do object, and I think with excellent reasons. I believe that if the Doctor will experiment with other insects, and observe his bees longer, he will also agree with me that another word than hibernation must be used.

We find a wasp in winter, when it is very cold. The wasp hibernates. We pick it up—it does not move nor does it sting us. We watch it for hours—there is no movement. We put it where it is colder—still there is no movement. The wasp is not dead, it hibernates. Possibly it may, while in this profound coma, take some oxygen, though I doubt it; certainly it eats nothing. Now, Doctor, is this analogous to the condition of the bees in their winter quiet? If not, and the bees hibernate, what shall we call this?

Next, let us examine the bees. They are also very quiet when the temperature is somewhere from 40° to 50° Fahr. I find that the temperature for this most quiet condition varies, probably due somewhat to the size of the colony, and very likely to the moisture in the air. The bees are not quiet like the wasp. I have marked the form of the cluster, when for some minutes I could not see the least signs of life. In an hour or two, examination showed that the form of the cluster had changed; indeed I found, by watching long enough, that we could see the outer bees push into the cluster. This, of course, is less satisfactory than leaving them and coming again to note the form of the cluster, for we might say the light irritated them. Yet the very fact that motion is induced, makes hibernation an inappropriate term to use.

I went into a large cellar the other day, with 50 colonies of bees in it. The temperature was 44° Fahr. My brother was with me. There was almost no sound, and no bees came out of the hives. If we would tap on any hive, we at once got the response in a gentle murmur, "All right." In another cellar at 41° Fahr., with a few less colonies, the bees were more noisy. As soon as we had a light in the cellar, the bees commenced flying out. Now, I ask Dr. Tinker if either of these were good examples of hibernation. Again Dr. Tinker says, and it is always true, that the centre of the cluster of bees was warmer than the outside. Now, if the bees are dormant—if they are fully hibernating—whence this warmth? Of course the heat is radiating all the time, and of course the bees *are* active, must be.

They breathe and move; only, however, but very little. We subjected the wasp to greater cold, and it waked not; I have found by oft-repeated experiments that greater cold waked the bees to greater activity. Dr. Tinker finds the same. They now *breathe more, eat more, move more.* Is not this curious hibernation? My idea—I think the popular idea—in truth, an excellent idea of hibernation—is stupor engendered by cold, which becomes the more profound as the cold increases. Grant the definition, and surely bees do not hibernate.

Let me ask Dr. Tinker if he would be willing to leave his bees without food, in case he was positively sure they would keep for weeks in this condition of greatest winter quiet. I do not believe that he would. He certainly would not the second time. Again, the hibernating wasp did not sting when we picked it up. Try the bee from the Doctor's "hibernating" cluster, and see if the results are the same.

Now I am through; and I shall not trespass on the space of the BEE JOURNAL again, I think, with this subject. I only desire that we should not use this term, when winter quiet or quiescence is just as good—I think far better—and we need this term for another phenomenon more startling and wonderful. If we use this term for bees, we may with hardly less impropriety call sleep hibernation. If our bees truly hibernated, we could withdraw food, reduce the temperature, and cry "Eureka!" with Bro. Clarke, knowing that with returning warmth our bees would wake to new life.

Agricultural College, ♀ Mich.

For the American Bee Journal.

The Champlain Valley Convention.

The Champlain Valley Bee-Keepers' Association met in Middlebury, Vt., on Jan. 21, 1886, being called to order by the President, Mr. H. L. Leonard, of Brandon, Vt. The report of the last annual meeting was read by the Secretary, and adopted.

A discussion was opened by Mr. E. J. Smith, of Addison, Vt., on the subject of "The best race of bees for profit." Although the subject was an old one, quite a spirited discussion followed. The experience of different members varied, but the majority were in favor of hybrids for all purposes. The ground was taken by Messrs. A. E. Manum, of Bistol, V. V. Blackmer, of Orwell, and others, that there were two distinct races of black bees—the small black bee and the larger brown bee. J. E. Crane, of Middlebury, held that they were not distinct races but the difference in appearance might be on account of difference in breeding and the kind of flora upon which they fed in different localities.

AFTERNOON SESSION.

The Treasurer's report was called for, and showed that the expenses incurred by the Secretary for the arrangements of the present meeting were more than the sum in the treasury. On the suggestion of the President a sufficient amount was collected to pay all bills and leave a balance in the treasury.

The committee on the nomination of officers presented the following as officers for the ensuing year: President, P. C. Abbey, Essex, Vt.; Vice-Presidents, W. H. Proctor, Fair Haven, D. S. Hall, South Cabot, and J. E. Crane, Middlebury; Secretary, R. H. Holmes, Shoreham; and Treasurer, J. E. Crane. On motion, the Secretary cast the vote of the Association for the above-named persons, and they were declared elected.

The following essay was read by Miss Marcia A. Douglas, of Shoreham, Vt., on

BEE-KEEPING FOR WOMEN.

It would be presumptuous for me, a novice of but two seasons' experience, to stand in the presence of these veterans in the field of apiculture and attempt to bring before them anything new or instructive upon this ancient, yet modern, theme. But I trust you will bear with me for a little, and if any errors creep in, remember that it is through ignorance.

Josiah Allen's wife says, "There are a dozen sides to everything," and I am sure that no bee-keepers would take exceptions to this assertion in regard to their business. But it is not my intention at this time to discuss more than *eleven* sides, for I could not profitably use more than the fifteen minutes allotted to me on the programme.

The necessary and primary elements in women to succeed in bee-keeping as in any other undertaking, is to perceive what needs to be done, and then be able to bring about the most satisfactory results with the least possible expenditure of time and labor. We must also love the bees, enjoy watching them, and strive to ascertain their requirements so as to be able to administer to their wants. The ever-recurring "cause and effect" must be traced out, and when we are able to accomplish this, amid the varied circumstances in this intricate business, we have taken the one all-important step to success.

We are told in "Holy Writ" that "Where no counsel is, the people fall; but in a multitude of counsellors there is safety." Surely, Solomon could not have considered that especially applicable to us—beginners in the bee-business! Why, there is such a diversity of opinions and so much contradictory advice given so freely and courteously through the various periodicals, that if we were to swallow it all and undertake to digest one-half of it, dyspeptic apiarists would be the inevitable sequel. I would not ignore all authorities—far from it; but I would carefully peruse them and extract therefrom such ideas as commend themselves clearly to our comprehension and individual need.

During my career I have been, and am still highly favored, in that I live not very far from reliable authority, and I avail myself of opportunities to ask questions, as may be attested by one of the brothers present. But there are emergencies in the apiary that try women's souls and call for prompt action. Then every particle of "bee-lore" in our possession is mustered into service to aid in response to the call. By way of encouragement, Harriet M. Morris states that, "The being who has for generations split kindling-wood with a case-knife, driven nails with a stove-hook, and defended herself with a broom-stick, may be relied upon to find a way to capture the most inconsiderate swarm that ever settled upon tree or post." Men have the advantage of us, they are such calm, moderate, deliberate creatures, and can adjust themselves so readily to circumstances! Now we are not to suppose for one moment that our Secretary was in the least disconcerted one day last summer, if he did have nine swarms come out at once and form one grand cluster; and at another time a very aspiring colony insist upon occupying the very highest branch of the tallest locust tree in the yard after having been offered a hive once or twice from some of the lower limbs! I think the climbing was the most trying to him, still, he is not one who would easily weary in well-doing!

The next side to be considered is that scientific bee-culture is an open field for women as well as men, and our opportunities for making discoveries and improvements are equal, and, withal, we are thought to be such ornaments or acquisitions to bee-keepers' associations that we are gratuitously voted into full membership. Now, judging from the past pre-eminent success of the score or more of women throughout this broad land, we can but take courage to press forward and make our way through this open gateway to the attainment of the same desired goal. By many it is often exclaimed mentally, if not audibly, "Oh, for an opportunity to earn money that I can call my own!" In the days of our grandmothers, country women could realize quite an income from the fruit of the spinning-wheel and loom; but that mighty motive-power, steam, has hoisted those machines to the attics, where the "young Americas" have, in play, brought them to such a state of dilapidation that but a few fragments of the originals are left to tell the story.

For several seasons past the poultry business has been quite a "fashionable summer resort," and in many instances with good results; yet, attended by no small degree of uncertainty, and besides, their pasturage is much more expensive than that of the bees. If we compete with our brothers in making pantaloons or in teaching school, we are imagined decidedly out of place in demanding as much pay as is commanded by them for the same work. Several years ago, during the operation of the cheese-factory near which I live, the dividends were made out by a man, one of the directors of the company, and when it was suggested that a certain woman make out the dividends and receive the same remuneration, another man in protestation affirmed that her time was not so valuable as that man's, and therefore it would be unjust for her to receive the same compensation for the work; and so that speculation came to an untimely end. But I have yet to hear of a crate of honey being shipped to any commission house at a discount because of its being produced by a woman! It is said "some women love to be dependent and to be compared to clinging vines which are lifted into the sunshine by sturdy oaks." But as far as my observation goes, that ground assumes the aspect of sinking sand; for have we not all seen trees encircled by thrifty, promising bark, that were hollow at the heart? and by and by has it not been deeply regretted that self-reliance had not been planted for a trellis?

Now in this next side, notwithstanding my limited experience, I think I shall venture to discourage all ambitious "vines" who contemplate embarking in this business, and any other persons that expect to find a "regular bonanza;" for with the present honey-market quotations one need not anticipate very heavy returns for time and money expended.

There are disagreeable sides to every calling; therefore do not expect to find the apicultural path strewn entirely with roses. No great feats are ever accomplished without the requisite self-sacrificing patience and perseverance.

If you are one whom the bees dislike, and, as you say, will go out of their line to meet and sting you, think twice before investing your money, for it is no laughing matter if one eye, swollen and aching, of necessity, closes its doors and refuses to be on duty for a day or two, and your features are all so distorted, that to be recognized by your mother, an introduction becomes necessary! Then those busy little bees have never had impressed upon them that one day in seven was made for rest; but instead of thus appropriating it, Sunday is one of their best days, regardless of your desire to attend church; and during their busiest season, when you cannot possibly go, comes most of the centennial celebrations and Fourth of July picnics. But it may be you deem it unjust for me to criticise the doings of these wonderful insects, still, they must bear in mind that everything under the sun must be subjected to that; and just here allow me to insert a few extracts from charges made on them by the London *Sporting Times*: "There is no insect more thoroughly objectionable than the bee. It is even more disgustingly active than the ant. Scientific persons are fond of telling us of the bee's tremendous geometrical knowledge, and parade in proof thereof the fact that it builds hexagonal cells, thereby packing the greatest number of cells, with the smallest possible amount of wax, within a given space. They fail, however, to notice that there is no law requiring bees to build their preposterously little cells. If they were really intelligent insects and knew the comparative value of wax and honey, they would build cells holding a pound of honey each, and thus enable a human being to eat honey without at the same time filling up the interior of his person with wax. This simple plan has never yet occurred to the bees. They go on building their antiquated and clumsy cells without once undertaking to improve upon them. They may be intelligent but they do not improve it by adhering to a pattern of cell invented by their antediluvian ancestors. To hold up these miserly and wantonly busy insect to the admiration of mankind is a positive outrage. It is time that a protest should be made and that mankind should henceforth be taught the plain and obvious truth that an insect which spends its whole existence in working and stinging is even more unworthy of emulation than is the mosquito or the book-agent."

But enough of this; let us now turn to tenthly: We must not jump at conclusions before hearing both sides of the question. This occupation, if pursued legitimately and scientifically, is ennobling and leads to clearer perceptions of the useful and ornamental, and in it there is no element of degeneracy. It enlarges our minds in the reception of the truths of natural history and botany, and paves the way for a more liberal culture. It moulds character whenever the enterprise has the soul-spmpathy of the one engaged in it, and makes us all enthusiasts. It is without doubt a healthful enterprise and will afford that long-felt need of most of our American women in the country—exercise in the open air. In short, it is an honorable pursuit and a laudable undertaking.

Eleventhly: If in the face of these numerous pros and cons you can unfalteringly endure the foretold pleasures and hardships, together with the not poetical, but literal "sweat of your brow," be assured that you are a fit candidate to receive a life-long certificate of admittance to the ranks of bee-keepers.

And now while we are here together comparing our ideas, let us all willingly submit to friendly criticism even if it does seem to upset some of our long-cherished theories. "Let the truth come to the front and stand conspicuously there; for truth will triumph whether we consent or not."

Besides the foregoing essay, others were read by V. V. Blackmer, Orwell, Vt., subject, "Is sweet clover a nuisance?" "Small packages for honey," by J. H. Martin, of Hartford, N. Y.; and "The variation of the honey season in different localities," by H. L. Leonard. The following subjects were then discussed: "The future outlook of sale and production of honey," "The best management of bees to prevent swarming," and "Marketing honey."

The most intense interest and enthusiasm' prevailed throughout the entire session. A prize was offered to the one producing the best essay, which was unanimously awarded to Miss Marcia A. Douglas.

There were over 80 persons present in the afternoon, and the Vermont State Vice-President of the North American Bee-Keepers' Society stated that there were more ladies present than were present at the Detroit Convention. It was decided that the name, "Champlain Valley Bee-Keepers' Association," should be changed to the "Vermont State Bee-Keepers' Association."

During the evening session reports of bee-keepers were read, which showed an aggregate of 1,652 colonies in the spring of 1885, and 2,565 colonies put into winter quarters last fall.

Premiums having been offered for honey-products and apiarian supplies, several articles were on exhibition. The awarding committee reported that on account of the exceptional excellence of the articles they found great difficulty in arriving at a conclusion.

The awards were as follows: Best bee-hive (complete), shipping-crate and honey-boxes, Drake & Smith, of Bristol, Vt.; best bee-feeder and clamp for boxes, D. S. Hall, of South Cabot, who also exhibited the "Heddon case;" best 10 lbs. comb honey, and best heavy comb foundation, Moody & Isham, of Weybridge; best 10 lbs. of extracted honey, R. H. Holmes. (The premium on extracted honey was afterwards given to Mr. F. H. Wright, of Enosburg, by mutual consent.) Best light comb-foundation, L. O. Thompson, of Weybridge; and best display of bee-keepers' requisites, Messrs. Drake & Smith.

A vote of thanks was tendered to the Secretary for his efforts in arranging and assisting in carrying out the programme of the meeting; also to the retiring President, for the faithful manner in which he had performed his duties, and to all who had participated in reading essays or in the discussions. It was decided that the time and place of the next annual meeting be left with the executive committee.

Thus ended one of the most profitable and enthusiastic gatherings ever held in the history of the Association.

R. H. HOLMES, *Sec.*

For the American Bee Journal

Small Hives vs. Large Hives, etc.

C. W. DAYTON.

I agree with Mr. Fuller, on page 56, that a large (average) hive is better than a small (average) hive, taking the apiary through. That he can get 10 solid frames of brood in every hive by the beginning of the honey-flow, shows that a 10-frame hive is the best for his location; while a 12-frame hive may be the best for Mr. Dadant's location, and an 8-frame hive the best for my location. There is a difference in location. I am through using division-boards both in the brood-chamber and upper story in half of the hives of my apiary. I did not use the division-board before the honey harvest to retard brood-rearing, but at the beginning of the harvest, in order to obtain honey instead of more worthless brood. On page 698 of the AMERICAN BEE JOURNAL for 1885, I gave my experience with different sized hives for last season, and also told how long it takes ordinary colonies to fill 12 combs with brood. I once had some experience in hiving swarms, of the kind that breaks the limbs of the trees, that issued so late in the honey harvest as to be unable to build comb in which to rear a sufficient amount of brood to maintain a colony. I have received the "Convention History" and I find that it greatly exceeds my expectations in typography as well as contents. I consider it a valuable acquisition, as will all who take any interest in bees. It contains the very heart of a first-class bee-book, and the second page alone is worth to me many times the price of the book.

Bradford, ♂ Iowa.

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For the American Bee Journal.

Temperature of Bees in Winter.

L. C. CLARK, (23–23).

I wish to add my testimony in favor of a temperature of about 40° for bee-cellars, and I was surprised that a temperature so high as 60° to 90°, as recommended by Mr. Ira Barber in his essay at the Detroit Convention, was allowed to pass unchallenged, and consequently is taken as the winter temperature for bees recommended by that Convention. From 60° to 90° is the temperature of an active state of existence, and we hold that the natural condition of a colony of bees, or their natural instinct, is to remain inactive or sleep during the winter season; and that this condition is best secured at a temperature of from 35° to 40°. If we examine a colony placed in so high a temperature as 60° to 90°, we will find that the bees scattered among the combs in a constant state of activity, and of course must wear out their lives in much less time than when they are kept inactive by a lower temperature.

It may be said that brood-rearing is constantly kept up in a high temperature, which may be true, but we must remember that rearing of brood largely, requires water, fresh pollen, and a chance for flight in the open air; two of these we cannot have in a cellar, and I cannot divest myself of the idea that sooner or later we will get into trouble by placing our bees in the cellar in a condition that they will rear much brood. We all agree that it requires a large amount of honey to rear brood, and it seems to be all unnatural to attempt to do so in winter confinement. I also find that when the temperature of the cellar goes below freezing, the bees at the outside of the cluster have a constant quivering motion of the body and wings, much more so than at the same temperature when out-doors. It appears that they are too cold and are trying to raise the temperature by a motion like a man with insufficient covering upon the bed—he will wake up and try to get warm. The bees are doing the same thing, and this constant motion or activity will wear out their vitality at a time when there are no young bees to replace the loss.

The question is about this way: At the close of the breeding season in the fall, we have a certain quantity of bees and honey in each hive—now which shall we do, place these bees in a condition that they will sleep quietly and not wear their lives out by activity? or shall we place them in a condition of activity where they will be constantly wearing out, and constantly rearing-brood with two of the conditions of successful brood-rearing lacking—fresh pollen and a flight, and also water if furnished to them at all in an artificial manner?

On page 809 of the AMERICAN BEE JOURNAL for 1885, Mr. Ira Barber says at the close of his essay, "Where but few bees are kept, where I live, they have no trouble in wintering them in any cellar where vegetables will keep without freezing." Now these cellars must from necessity be kept above freezing and will probably range from 35° to 45°. And if small lots of bees winter in these cellars without trouble, why does he recommend a temperature so much higher for large lots of bees? Probably 19 bee-keepers in 20 pursue some other calling—generally farming—and generally have cellars that will keep vegetables without freezing, and cannot conveniently adopt a temperature which would require artificial means to keep it up with small lots of bees. I cannot agree with Mr. Heddon where he quotes Mr. Barber on page 12, by saying, "The wintering problem is solved." The tendency seems to be toward cellar-wintering in preference to out-door packing, but there is a wide difference of opinion as to temperature, moisture and ventilation, and whether it is advisable to raise the temperature toward spring to encourage breeding. These are points which we should all experiment on, and observe, and now is the time of year to do so.

Granada, ♂ Kans.

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Convention Notices.

☞ The annual meeting of the Rhode Island Bee-Keepers' Society will be held on Feb. 11, 1886, at Providence, R. I. GEO. A. STOCKWELL, *Sec.*

☞ The Cedar Valley Bee-Keepers' Association will hold its winter meeting at the City Hall in Laporte City, Iowa, on Feb. 17 and 18, 1886. Reduced rates are offered at the hotels. A very complete programme is prepared with ample time to discuss subjects of importance to bee-keepers. A cordial invitation is extended to all to be present.

H. E. HUBBARD, *Sec.*

☞ The New Jersey and Eastern Bee-Keepers' Association will hold their ninth semi-annual convention at Cooper Union (Room 22) in New York City, on Wednesday, March 10, 1886, at 9:30 a.m. All who are interested in bee-culture or honey are respectfully invited to attend. We expect a large delegation from the Philadelphia Association to meet with us, and it promises to be one of the most interesting as well as instructive conventions that this Association has ever held. A special invitation is extended to ladies, well knowing that they are by no means a small factor in our industry. Beginners, it is well known, will learn more by attending one good convention than a year of practical experiments will teach them. All are requested to bring something to exhibit, and if you cannot come, send us an essay to read on some live subject. W. B. TREADWELL, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ Owing to the inclemency of the weather, the meeting of the Marshall County Bee-Keepers' Association was postponed from Jan. 16, 1886 to Feb. 20, 1886; at which time the same programme will be carried out as was intended for Jan. 16.

J. W. SANDERS, *Sec.*

☞ The fourth annual convention of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Moore's Hall in Davenport, Iowa, on Feb. 17 and 18, 1886. A number of prominent apiarists are expected to be present. Everybody interested in bee-keeping should not fail to come, as all topics of interest to those engaged in the sale and production of honey and bees will be thoroughly discussed. Everybody present are requested to take part in the discussions. Supply dealers and those having honey and beeswax are requested to bring the same for exhibition.

WM. GOOS, *Sec.*

☞ The Seventeenth Annual Convention of the New York State Bee-Keepers' Association (formerly the Northeastern) will be held in Rochester, N. Y., on Feb. 16, 17 and 18, 1886. This will be one of the largest meetings ever held in the State. A large number of our most experienced bee-masters will take part in the discussions, and several essays will be read from a number of our most practical apiarists throughout the country. The programme is complete. If you are young in the work you can not afford to stay away—if older, you may give some good hints, if you get none. We want a good display of all kinds of supplies and fixtures. We have a room on purpose for exhibits, and any goods sent to the Secretary in care of the "National Hotel," Rochester, N. Y., will be placed on exhibition, and either sold or returned to the exhibitor, as directed. Reduced rates at the hotels have been secured, also rates on some of the railroads. All will have to pay full fare one way—return ticket at 1-3 fare by presenting certificate from the Secretary, who will furnish them on application. We want an active vice-president in every county in State. Please name one or send the name of some one, for your county.

F. C. BENEDICT, SEC.

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Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

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☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

Local Convention Directory.

1886. *Time and place of Meeting.*

Feb. 11.—Rhode Island, at Providence, R. I.
Geo. A. Stockwell, Sec., Providence, R. I.

Feb. 16-18.—New York State, at Rochester, N. Y.
F. C. Benedict, Sec., Perry Centre, N. Y.

Feb. 17, 18.—Cedar Valley, at Laporte City, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.

Feb. 17, 18.—E. Iowa & W. Ills., at Davenport, Iowa.
Wm. Goos, Sec., Davenport, Iowa.

Feb. 20.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Feb. 24.—Oneida County, at Rome, N. Y.
O. J. Evans, Sec., Camroden, N. Y.

Mar. 10.—N. Jersey & Eastern, at N. Y. City, N. Y.
W. B. Treadwell, Sec., 16 Thomas St., New York.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM
OUR LETTER BOX

Good Results.—A. P. Lawrence, Hickory Corners, ♀ Mich., on Jan. 26, 1886, writes :

In the fall of 1884 I placed 91 colonies in the cellar, 4 of them starved, 12 were lost by "spring dwindling," I sold 2, and started in 1885 with 73 good colonies of bees from which I cleared $300. The first part of the season was all that I could ask for, but after the last of July there was but very little honey gathered. We have to depend mostly upon white clover, and there is but little basswood in this vicinity. I increased my apiary to 114 strong colonies. I took 3,500 lbs. of honey, 700 lbs. being extracted. I moved my apiary 1 mile on November 26, and placed them in the cellar, and now they are all in good condition.

Bees Wintering Finely.—C. H. Putnam, Galesburg, +○ Ill., on Jan. 28, 1886, writes :

My bees thus far are wintering finely. I have just examined them, and I find that there has been no accumulation of moisture in the hives, and no signs of disease ; they also appear very contented, and remain quiet on the approach of the light. I am wintering them in two bee-houses, into which I placed 113 colonies on Dec. 6 and 7, 1885. I keep the temperature as near 45° above zero as possible. Last season was a very poor one for honey in this locality. All of my bees have natural stores, which I consider the proper food for them.

Actions of Bees in Winter.—J. A. Procter, Union City, ○+ Ind., on Jan. 30, 1886, says :

I have 11 colonies of bees in a bee-house made purposely for them, with sawdust filling. Then the hives are packed in sawdust 3 or 4 inches deep, and there is so much difference in the different colonies that I begin to conclude that the bees of no two colonies act alike under the same conditions. One of these colonies was out at the front of the hive, and all over it when the mercury was 10° below zero, and the bees of the hives next to it were perfectly quiet. There is another colony that at any time since they were put in, the bees can be seen in the entrance of the hive humming merrily ; and the next one to it is perfectly quiet. If some of our experts in apiculture will explain the reason for the different actions of the different colonies side by side, I will be very grateful.

Reports of the Honey-Crop.—L. Highbarger, Adeline, ♂ Ill., on Jan. 28, 1886, writes :

I was well pleased with Dr. C. C. Miller's report, page 44, as far as it goes, but I do not think that it covers all the ground. It is entirely wrong, not only to ourselves but to the honey market, when bee-keepers report only when they obtain large crops of honey, and not when they have small crops. The Doctor's ideas have the right jingle, but do not jingle enough ; there is one great point left out—how much sugar syrup have we fed in order to carry our bees through the winter ? Now, Doctor, how much sugar syrup have you fed to carry those 340 colonies through the winter ? I move an amendment, Mr. Editor, to the Doctor's suggestions, and will sanction it by giving my report :

No. colonies, Fall 1884........	70
" " Spring 1885......	40
" " Fall 1885........	60
" lbs. of Honey " "	400
" " Sugar Syrup fed, 1885....	400
Surplus......................	000

I attribute my winter losses to the so-called honey-dew—not to pollen.

P.S.—My object is to show to the consumer that our honey crop is not all dollars and cents. We have been showing the bright side too much, and the dark one not enough.

Dampness in Hives, etc.—Allen H. Thorne, Fountain City, ○+ Ind., on Jan. 21, 1886, writes :

It is too early in the season to make a report for this winter, but I can report up to Jan. 18, 1886. In the fall of 1884, I placed 23 colonies in winter quarters packed in sawdust. All were weak, and all died but one, caused, I think, from dampness collecting on the under side of the oil-cloth and dripping down on the bees, thus causing them to become diseased, and what did not die with disease froze during the cold nights of last winter. One-half of the colony that I saved froze to death. They clustered on both sides of a comb near the centre of the hive, and all on one side froze in a cluster, leaving those on the other in good condition, and as bright as they were in the fall. I increased them to 5 colonies, and obtained 36 pounds of honey, besides leaving about 30 pounds in each hive, part of it being extracted and part comb honey. I purchased 3 colonies and emptied 8 hives of all their contents for one of my neighbors, that he was calculating to kill for their honey. I put them into hives on 7 combs, and fed 26½ pounds of syrup made of coffee A sugar to each colony in September, and then packed them for winter the same as I did last fall, with the exception that I took the enameled cloth off and put burlap covers in their place, giving them ⅜-inch space over the top of the frames for a bee-space. I left the top off of the hive and put 8 inches of dry sawdust over all and 18 inches of dry flax-tow on top of the sawdust, well packed down ; the object being to keep the dampness out of the hives. They are wintering well so far without any sign of disease. I also gave them from 1 inch to 5 inches at the entrance of the hives as an experiment, and I now see no difference, for all are wintering well. We have had some pretty cold weather—20° below zero.

My Experience in Bee-Keeping.—N. W. Afflerbaugh, of Cameron, ⊙ Nebr., on Jan. 25, 1886, writes :

Two years ago last August I obtained 2 colonies of bees, the hives being then full of brood, but without honey. They worked on the heart's-ease, and in 2 weeks they filled the hives with honey. Heart's-ease is one of our best honey-plants. I increased them to 17 colonies by division. I am wintering them on the summer stands packed in straw, and to-day they had a flight. They came out dry, healthy and strong. I am wintering them on their natural food—honey—which was made for both them and man. The hive I use is one of my own construction, being a double-walled chaff hive. It opens on the side, so I need not lift out the frames, as they are taken out on the side ; a bee-feeder in the back end of the hive, put in when the hive is made, and is intended to remain there. It does not interfere with anything about the hive, and I can feed both in summer and in winter with no danger of robbing. The beauty of it is in handling the frames by taking them out at the side, thus causing scarcely any disturbance of the bees. I am well pleased with it.

No Trouble in Wintering.—L. F. Guice, Winterville, +○ Miss., on Jan. 26, 1886, writes :

I am now shipping the last honey from the crop of 1885. I started with 43 colonies for producing extracted honey, and 13 for increase, and during the season I took 5,500 pounds of honey, some of which I sold at home for good prices, and shipped the balance to different markets, realizing about 4 cents per pound for it. I closed the season with 108 colonies in good condition, and all of them at this time seem to be doing well. I intend to build up a better home market, as it does not pay to ship honey. We of the South do not have any trouble about wintering our bees—leave them plenty of honey in the fall and they will be all right the next spring. There is only a month or two here that bees do not bring in some pollen, and I think it is as necessary for them as bread is for people. I hope that we may have a prosperous season this year.

Bee-Keeping in Southern Ohio.—E. Henkle, of Washington C. H.,♀ O., on Feb. 2, 1886, says:

I was very unsuccessful with my bees last season, having lost 18 colonies with diarrhea last spring, which left me 34. I had only one swarm during the summer, and obtained only about 40 pounds of comb honey, and no extracted honey. I have about 300 section-boxes nearly full, but the drouth set in so soon and cut the white clover bloom off so short that the bees could not finish them. We had no fall honey. I have 35 colonies packed with chaff and leaf cushions on the summer stands. I cannot say how they are wintering at present, as they have had no flight since Jan. 1. My bees never were strong enough during the summer to swarm naturally or bear dividing. I have concluded that the southern part of Ohio is a poor place for an apiary. When I read the reports of other bee-keepers getting 300, 400 or 500 pounds of honey from one colony, and when I have never been able to get over from 40 to 50 pounds per colony, it looks to me as being very doubtful.

Knowing Pure Honey.—W. Mason, Fillmore,⊸ Ind., on Jan. 30, 1886, says:

While attending the recent meeting of the Indiana State Bee-Keepers' Association, I was frequently asked how we are to know when we are getting pure honey. My first answer was, "Buy of only honest dealers or producers." Every consumer who buys honey of a dishonest honey-producer or dealer, and is satisfied of this fact, should publish such parties as a fraud, and thus warn the people. It should be one of the essential points that our associations should watch and stamp out all such frauds in the honey-markets, and see that no one has a place in our meetings who is guilty of selling adulterated honey. The time will soon come when the consumer will know of whom to buy his honey, for it is fast becoming one of the staples of table sweets, and we will soon know pure honey almost by sight, if not by taste.

Prospects in California.—J. D. Enas, Napa,⊸ Calif., on Jan. 1, 1886, writes:

We are having a wet season and warm rains so far, with prospect of a fair honey season for 1886. As considerable seed did not sprout last season, and the birds and wild game must have cleaned up pretty well what seed did mature, bees are generally in poor condition. It will take most of the early crop to get them built up. Bloom is starting, but it is sparse, though should we have a warm spring, there may be a good late-season, as the ground is perfectly saturated with water. Farmers are buoyant as a general thing, grain is up several inches in height, and the hills are green with feed for farm-stock. Weeds will be plentiful. Stock can get their living now in the hills where there is shelter. The ditches and rivers are all full of water. In my article on page 776 of the AMERICAN BEE JOURNAL for 1885, it reads thus: "It appears to them that bees *can* bore or puncture fruit," instead of reading, "It appears to them that bees *cannot*," etc.

The Lewis Exhibit.—Dr. A. B. Mason, Wagon Works,⊸ O., on Jan. 22, 1886, as chairman of the committee on exhibits at the Detroit Convention, writes as follows:

MR. EDITOR: The report of the committee on exhibits at the recent convention at Detroit, did not include the exhibit of G. B. Lewis & Co., of Watertown, Wis. In a letter to Mr. G. M. Doolittle, a member of the committee, they call attention to the omission. Their letter was forwarded to me, and I wrote them, asking what they exhibited and where. In reply they say: "Our sections were displayed in the sample room of the Newhall House, and also they were brought down to the office." This accounts for the omission in the report, for the committee supposed that all the exhibits were made at the Antisdel House. They state: "We exhibited only 4¼x4¼, open-top, very white basswood sections, and some English section-folders." Please insert the above in the BEE JOURNAL.

[If the "exhibit" mentioned was not made at the place designated for such by the Society, that, of course, accounts for the omission in the report of the committee. We are also cited to the fact that the names of neither of the members of the firm are enumerated in the published list of members of the Society. On that, we know nothing more than we find in the report as published.—ED.]

Bees in Splendid Condition.—Wilson Sherman, Chester Centre,⊙ Iowa, on Jan. 22, 1886, says:

My bees were placed in the cellar on Dec. 5, 1885. They had a chance for flight every day up to Dec. 4, if they wished to do so. They have now been in the cellar over a month and a half, and they are all quiet and in splendid condition. I do not think that they have consumed on an average over 3 or 4 lbs. each, so far. The temperature of my cellar has varied between 44° and 48° above zero. The winter was very mild up to Jan. 1, but since that time the weather has been very cold, and bees that were left out-doors are suffering considerably.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 8, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 6@8c. per lb.

BEESWAX.—24@26c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for honey continues dull, and prices are ruling lower; however, if the cold weather continues, it may improve the trade in a short time. We quote as follows: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9½@11c., and in unglassed 2-lbs., 11@12c. Buckwheat honey in 2-lb. sections, glassed, 9c.; in 1-lb. sections, glassed or unglassed, 10@11c. Extracted—white clover 6½@8c.; buckwheat, 5½@6½c.

BEESWAX.—Prime yellow, 26@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—The demand is extremely slow for extracted honey. Manufacturers seem to have taken a rest. There is only a fair demand for honey in glass jars, and for comb honey. Prices are unchanged and nominal, with occasional arrivals and a large stock on the market. We quote extracted honey at 4@8c., and choice comb honey at 12@14c., in a jobbing way.

BEESWAX.—There is a good home demand for it. We pay 25c. per lb. for choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14@15c.; 2-lbs., 12@13c. Dark fall honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very fine extracted honey this week at 5c., and stocks continue to accumulate.

BEESWAX.—Scarce and higher—22@25c.

CLEMONS, CLOON & Co., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote comb honey in 1-lb. sections at 14@16c., and 2-lb. sections at 12@14c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10@12½c.; amber, 7@8c. Extracted, white liquid, 5¼@5½c.; light amber colored, 4½@4¾c.; amber and candied, 4½c.; dark and candied, 4@4¼c.

BEESWAX.—Quotable at 23@25c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—It is dull and lower. Best white in 1-pound sections, 15c. There are no sales of dark honey. Light extracted brings 10 cts. in 25 and 50 pound tin-cans.

BEESWAX.—25@27c. M. H. HUNT.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

When renewing subscriptions please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Beeswax Wanted.—We are now paying **24** cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages).............	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages).............	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

Any person not a subscriber, receiving a copy of this paper, will please consider it an invitation to become a subscriber to it.

Cash in Advance is the rule, but no longer than six months of grace can be allowed on the small sum of $1.00. Subscriptions may commence at any time, and discontinuances may be ordered at any time, when arrearages are paid up.

Agents can sell the Guide and Hand-Book like "hot-cakes." Send us an order for five copies (with $2.50) and we will send you the Weekly BEE JOURNAL *free* for a year. This is a *rare* opportunity to get the Weekly BEE JOURNAL without cost ! !

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

All the Numbers from the beginning of the year are sent to new subscribers, unless otherwise ordered.

Extracted Honey.—Any one having white extracted honey for sale, are invited to correspond with us. We are paying 7 cents per lb. for it, delivered here.

Write to F. J. Crowley, Batavia, N. Y., for Price List (1886) of Apiarian Supplies, Bees, Queens, Foundation, etc.

To Fill the egg basket, keep the poultry supplied with bones, shells and offals of bones with meat on, ground to a suitable size. To do this get one of Wilson's Hand Mills.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

NOTICE.—For $3.00 I will mail direct, Frank Cheshire's great scientific work now publishing in parts, "Bees and Bee-Keeping."—Arthur Todd,—Dadant Foundation Depot—Germantown, Pa.
6A4t

WANTED.—Two young men to work with bees. Three hundred colonies—27 years' experience. Address, **S. I. FREEBORN.**
4Atf ITHACA, WIS.

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo.
4Aly

1869. UP WITH THE TIMES. 1886

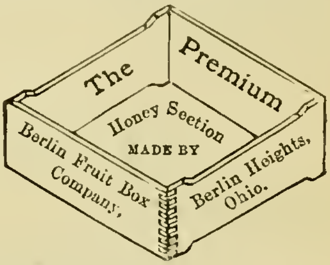
Armstrong's Perfection

CROWN HIVE.

The brood-frames, honey-rack, and section-boxes are all **Reversible.**

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.

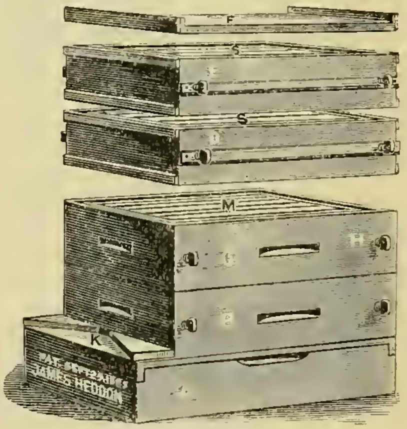
Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.



AWARDED First Premium at Michigan State Fair in 1884; and and again in 1885 at the Inter-State Fair held at St. Joseph, Mo. Prices greatly reduced. SPECIAL RATES on large lots. Address as above for price list of Apiarian Supplies and Berry Packages. 6A3t

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cap, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cap; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete. The same ready to nail, $2.75. For further particulars send for our new Illustrated Catalogue for 1886.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL

1886
GREGORY'S
SEED
CATALOGUE
1886

FAIR AND SQUARE DEALING.

Believing that if a man has dealt squarely with his fellow-men his patrons are his best advertisers, I invite all to make inquiry of the character of my seeds among over a million of Farmers, Gardeners and Planters who have used them during the past thirty years. Raising a large portion of the seed sold, (few seedsmen raise the seed they sell) I was the first seedsman in the United States to warrant (as per catalogue) their purity and freshness. My new Vegetable and Flower Seed Catalogue for 1886 will be sent **FREE** to all who write for it. Among an immense variety, my friends will find in it (and in none other) a new drumhead Cabbage, just about as early as Henderson's, but **nearly twice as large!** **James J. H. Gregory, Marblehead, Mass.**

EVERGREENS

and European Larches; all sizes. All Nursery grown at prices never before offered. Norway Spruce, Scotch, Austrian, White and Mountain Pines, Balsam Fir, Northern Red Cedar, and Arbor Vitea from $3. per 1,000 up Shipped with safety to all parts of the U.S. Price list free. **D. HILL,** Evergreen Specialist, Dundee, Ill.

4E4t

Western BEE-KEEPERS' Supply House.

We manufacture Bee-Keepers' supplies of all kinds, *best quality at lowest prices.* Hives, Sections, Comb Foundation, Extractors, Smokers, Crates, Honey Buckets Veils, Feeders, Bee-Literature, etc., etc. Imported Italian Queens, Italian Queens, Bees by the lb., Nucleus or Colony. "Bee-Keepers' Guide, Memoranda and Illustrated Catalogue" of 48 pages FREE to Bee-Keepers. Address **JOSEPH NYSEWANDER, DES MOINES, IOWA.**

1E6t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Established 1857.
Satisfaction Guaranteed.
BAKER & CO.
DESIGNERS AND
ENGRAVERS ON WOOD.
CORNER OF
CLARK & MONROE STS.
FOOT BLOCK. CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES

Bingham Smokers

AND

HONEY-KNIVES.

Send for Circulars.

Bingham & Hetherington,
ABRONIA, MICH.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A FASCINATING PURSUIT.

Queen-rearing is a fascinating pursuit. Every bee-keeper should rear a few queens for amusement and experiment. The best method for rearing queens may be found in the third edition of **The Bee-Keepers' Handy-Book,** a work of 300 pages and 100 illustrations. Of this treatise on bee-culture, Mr. Langstroth says: "It certainly is the *best* authority on this important branch of bee-keeping. You have done more, in my opinion, than any one else to facilitate the breeding of choice queens, and to simplify the process by which those who breed such queens either on a large or small scale, can make the most of all time they devote to this important branch of bee-culture."

The book is handsomely and substantially bound in cloth, and sent by mail for $1.50 per copy.

Prospectus and price-list of queens and supplies sent free. Address,

4Etf **HENRY ALLEY & CO.,** Wenham, Mass.

BEESWAX.

We pay **24c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

J. M. SHUCK,
DES MOINES, IOWA.

10A1y

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,
SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHAS. F. MUTH & SON,
Freeman & Central Ave.. - CINCINNATI, O.

P.S.—Send 10c. for Practical Hints to Bee-Keepers

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Given's Foundation Press

THE GIVEN PRESS stands in the **front rank** for manufacturing **FOUNDATION in Wired Frames,** as well as foundation for **SECTIONS.** Without a dissenting voice, all of our customers affirm its superiority.

Send for Circular and Samples.

J. R. CALDWELL & CO.,
1ABtf HOOPESTON, Vermillion Co., ILL.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

C. B. LEWIS & CO.
51Atf. **WATERTOWN, WIS.**

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

THE BRITISH BEE JOURNAL

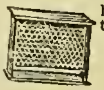
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

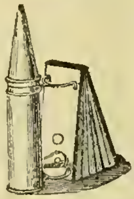
FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.



Bee-keepers' Supplies,

Standard Langstroth,

Quinby Standing-Frame,

And all other kinds of **Hives,** MADE TO ORDER,

Quinby Smoker a specialty.

I shall supply anything you need in the Apiary. Send for Illustrated Price List.

W. E. CLARK, successor to L. C. Root,
7A1y ORISKANY, Oneida County, N. Y.

SALARY of $90 a month and Expenses paid agents everywhere to travel and sell staple goods to dealers, or $40 a month & expenses to distribute circulars in your vicinity. All expenses advanced, salary promptly paid. Sample package of our goods and full particulars **FREE.** Send 8 cents for postage, packing, etc. We mean what we say.
NATIONAL SUPPLY COMPANY,
Palace Building, Cincinnati, Ohio.

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ⅓ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Feb. 17, 1886. No. 7.

The Bees are Glad!—The fine and spring-like weather of the past week has been very general, and the bees have been enjoying a nice flight. The mild weather has extended from the Atlantic to the Pacific coasts. Bee-keepers generally are rejoicing and are nearly as hilarious as the bees. There is a good prospect now for a bountiful crop of honey during the present year, for the clover has been protected by the snow, and it looks very healthy.

Dr. C. E. Rulison, of Flushing, Mich., drove 30 miles on Wednesday morning, Feb. 3, to attend the Bee-Convention at East Saginaw, Mich., and returned in the same manner in the evening of that day. A journey of 60 miles to attend a "bee-talk" shows that the Doctor is an enthusiast.

Florida has suffered very much this winter from "the cold wave." The mangroves have been killed, and this source of honey destroyed. The orange trees have suffered, and the oranges are frozen. One redeeming feature may be mentioned, which we find in a Southern paper, viz: "that Northern capitalists propose to utilize the frozen Florida oranges by making wine of them, for which purpose the frost has not injured them."

Fertilizers.—Where the materials come from; where to get them in the cheapest form; how to compound formulas, etc., by J. J. H. Gregory, A. M., is the title of a pamphlet of 116 pages, just issued from the press of Rand, Avery & Co., Boston, Mass. It contains much practical information, given in language that farmers can understand. It has been heartily endorsed by such men as Dr. Sturtevant, of the New York Experimental Station. Price, 30 cents.

The Indiana State Fair will be held at Indianapolis, Ind., commencing Monday, Sept. 27, 1886, and hold for a week.

The Rev. Robert West, editor of the *Advance*, appears to be too busy with "revival work" to even notice our demand for a retraction of his *falsehoods* about comb honey being manufactured, filling and "capping the so-called honey-cells by machinery," etc. We have always supposed that religion should make men *honest* (especially those "who minister at the altar"), but Mr. West's example indicates just the opposite!! He stands convicted, by the facts, of having broken the Ninth Commandment, which was thundered from Sinai in these words: "Thou shalt not bear false witness against thy neighbor," and when it is pointed out to him, instead of making an *honest* confession that he was deceived by that *lie* of Prof. Wiley, (which the latter says he wrote as "a scientific pleasantry," and not as a sober fact,) Mr. West dodges the issue, says that he "surmises," has "reason to believe," etc., but wilfully withholds the retraction, meanwhile allowing the *falsehoods* to be copied by hundreds of papers all over the country, which naturally believe them to be true, because they were positively stated as facts by a "minister," and sanctioned by their appearance in a "religious paper!" During all this time an honest industry is suffering on account of his unjust accusation, and subsequent unhallowed silence! Is not a profession of "religion" which permits such base characteristics, a mockery? Does not the actions of such "priests" do more harm to public morals than all the good their preaching could do in a life-time? "True religion" bleeds at every pore, being stabbed by its *professed* friends and hired-laborers. Solomon, the wisest of men, remarked: "He that uttereth slander is a fool."—Prov. x, 18. This is as true to-day as it was 3,000 years ago, when it was written.

New Price-Lists have been received from the following persons:

E. Kretchmer, Coburg, Iowa.—30 pages—Bee-Keepers' Supplies, Apiarian Implements, Italian Bees, etc.

B. Walker & Co., Capac, Mich.—4 pages—Apiarian Supplies.

Monroe County Nurseries, Rochester, N. Y.—10 pages—Trees, Shrubs, Plants and Vines.

Elwanger & Barry, Rochester, N. Y.—48 pages—Fruits Cultivated at Mount Hope Nurseries.

F. N. Lang, Baraboo, Wis.—48 pages—Tree, Flower, Vegetable and Field Seeds.

E. H. Ricker & Co., Elgin, Ills.—20 pages—Elgin Nurseries.

J. W. Bittenbender, Knoxville, Iowa.—12 pages—Bee-Keepers' Supplies.

F. J. Crowley, Batavia, N. Y.—12 pages—Apiarian Supplies, Bees, Queens, etc.

R. H. Allen, 191 Water St., New York.—92 pages—Seeds, Roots, Plants, and Garden Requisites.

Edward Gillett, Southwick, Mass.—16 pages—Plants.

D. B. Ulery, New Carlisle, O.—16 pages—Bees, Queens and Apiarian Supplies.

John Nebel & Son, High Hill, Mo.—6 pages—Bees, Queens and Bee-Keepers' Supplies.

Emil J. Baxter, Nauvoo, Ills.—2 pages—Honey.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

Food Adulteration.—The Cedar Rapids, Iowa, *Standard* says: The following is a copy of the bill introduced into the House of Representatives by Congressman Frederick. It has been read twice, referred to the committee on the judiciary and ordered to be printed. It is an important measure, and should be adopted:

> A Bill to prevent the adulteration or imitation of food:
>
> Be it enacted by the House of Representatives of the United States of America in Congress assembled, that it shall be unlawful for any individual, company, or corporation to manufacture or sell, any adulterations or imitations of food whatever, unless they be branded or stamped, plainly giving the ingredients contained therein, and the relative proportion of each ingredient contained therein.
>
> SEC. 2. That any person who manufactures, sells, or offers for sale any adulterations or imitations of food of whatsoever kind, unless the same be plainly branded or stamped as heretofore provided, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by fine or imprisonment, the fine to be not less than $200, and the imprisonment not less than six months, or both fine and imprisonment, at the discretion of the court.
>
> SEC. 3. That any person or persons filing information, under oath, that leads to conviction of above, shall be, and is hereby, entitled to one-half of the fine imposed for such violation.

In the South the present winter has been very severe, and nearly all the disasters to bees so far recorded are from that section. The Rev. L. Johnson's letter in this week's JOURNAL is a sample of the wide-spread desolation among bees. Let us hope that the frost may be of some value in other ways. The Chicago *Times* says:

> The recent freeze at the South was not an unmixed evil. The frost penetrated the earth to the depth of a foot, and soil that had been impacted for several years was loosened and made ready for unusual productiveness, while numerous pests of the worm and bug order were probably destroyed by the cold.

Opinions expressed concerning the pamphlet on Convention History and Reports of the National Society from its commencement, are as follows:

The "Convention Pamphlet" is a *souvenir* of apicultural intelligence, and worth many times its price to any bee-keeper.—James Heddon, Dowagiac, Mich.

It cannot fail to awaken renewed interest in future Conventions, to publish the Reports in pamphlet form.—J. H. Andre, Lockwood, N. Y.

The publication of the History of the North American Bee-Keepers' Society in pamphlet form is a grand thing, and you deserve the thanks of the whole bee-keeping fraternity. I appreciate it.—J. B. Mason, Mechanic Falls, Maine.

It contains a great deal of valuable information for bee-keepers.—F. L. Dougherty, Indianapolis, Ind.

It is certainly very valuable to those who have but a limited knowledge of conventions, and none can afford to do without it.—Frank A. Eaton, Bluffton, O.

The Convention Report Pamphlet is received. The whole work is a credit to your office, from the subject-matter to the cover.—T. L. Von Dorn, Omaha, Nebr.

It is standard authority on the doings of the Society, and no library of bee-literature will be complete without it. I think that every member and all others particularly interested in the fascinating pursuit of apiculture, will extend a vote of thanks for compiling a work so valuable and useful to the bee-keepers of North America.—C. R. Isham, Peoria, N. Y.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Using Old Comb Foundation.

Query, No. 197.—Last spring I filled brood-frames for about 20 hives with comb foundation, and also starters in surplus boxes. Can I use them next spring as they are, or will cold weather or age injure them? If so, what shall I do about it?—P. W., New York.

Use them.—JAMES HEDDON.

I should use them as they are.—G. M. DOOLITTLE.

I should use them as they are.—C. C. MILLER.

You can use them. If warmed up so as to soften the wax, they will be as good as ever.—A. J. COOK.

Place the brood-frames in the sun, do not allow them to get too warm, put them into hives having good, strong colonies, and they will be all right.—H. D. CUTTING.

It is possible that the foundation may not be drawn so quickly, but it can be used. If it is not readily drawn, dip it into water heated to 120°; if this does no good, melt it and have it made over.—W. Z. HUTCHINSON.

If they are kept where dust will not settle upon them, they can be used another year as they are. If the foundation becomes partially detached from the frames, as it sometimes does, it may be re-waxed just before using.—G. L. TINKER.

Neither age nor cold will injure them. Look out for mice in winter, and moths in summer. Keep them dry.—DADANT & SON.

If you manage them rightly you will have no trouble. If you hive swarms on them, give the swarms no more combs at a time than they can completely cover. The only difference between old and new foundation is that the former being dry and hard requires a higher temperature in the hive when it is being worked into combs.—G. W. DEMAREE.

I have used foundation 4 and even 5 years old, and found no trouble in its being accepted and drawn out. If found too dark for surplus it will be fully as good as any for use in the brood-chamber. It will be well to dip old foundation into warm water to soften it a little before giving it to the bees, if it is found to be very hard.—J. E. POND, JR.

Keeping Bees Near the Railroad.

Query, No. 198.—I have 120 colonies of bees that I expect to move in the spring within 50 yards of the railroad where there is a very heavy grade. The trains sometimes shake the windows in my house. Will the noise or jar caused by the trains molest or prove fatal to the bees?—P. B. F., Mo.

No. The bees will get used to it.—DADANT & SON.

I have always considered near a railroad an unfavorable location for an apiary.—H. R. BOARDMAN.

I would prefer to move them away from the track if possible.—H. D. CUTTING.

The cars will do no harm at all, I think. The smoke will be more to be feared than any jar or noise.—A. J. COOK.

I knew of one instance of the kind, and I doubt if any harm resulted.—C. C. MILLER.

I should have no fears about the railroad injuring the bees. My apiary is situated near a railroad over which not less than ten regular trains pass daily.—G. W. DEMAREE.

I have kept bees for 15 years within 30 yards of a railroad, where heavy trains are passing every hour. I have never seen any ill-effects therefrom. The trains sometimes jar my whole house. From my experience I should apprehend no difficulty.—J. E. POND, JR.

I think not in the summer, but if they are placed in a cellar for wintering, the bees will be agitated by every passing train.—G. M. DOOLITTLE.

I think not. Colonies in trees are often jarred or swung about by the wind. This disturbance is of a somewhat different character, but I do not think either would be detrimental.—W. Z. HUTCHINSON.

It will have no effect upon them if other conditions are right. It is like bee-bread, it does not injure bees if not eaten out of season; and it will not be eaten if conditions are right.—JAMES HEDDON.

I have known bees to be located near a railroad track, but they did as well and wintered as well as other bees. They probably get accustomed to the jarring noise. From the experience of a Canadian bee-keeper who kicked the hive containing his Carniolans, with diminished effect every time, this particular strain of bees would do nicely located near your "heavy grade."—G. L. TINKER.

Apiary Near a Railroad Track.

Query, No. 199.—Will an apiary located 10 rods from the railroad track be affected by the jar of the trains so that they will not winter as well? Will the bees eat more, or will it have a bad effect on them in any way? E. E. S., Mich.

I think not.—W. Z. HUTCHINSON.

No harm will result, I think. See Query, No. 198.—A. J. COOK.

The railroad will do your bees no harm at that distance from it.—G. W. DEMAREE.

I would prefer them at a much greater distance.—H. D. CUTTING.

I should prefer not to locate an apiary near a railroad if I had my choice. I should consider the smoke in summer from the engine more objectionable than the noise or jarring—H. R. BOARDMAN.

I think not. See my answer to Query, No. 198, for reasons. As to wintering, I see no trouble; some colonies eat more and some less, in any case. I have lost only 2 full colonies in 20 years of wintering on the summer stands, and both of those starved last winter when I was sick and could give them no attention.—J. E. POND, JR.

See Query, No. 198. Also: Last winter I selected one of my colonies wintering so nicely upon all sugar-syrup stores, and jarred it, and aroused it every day for weeks, and when put out, the bees, like others wintered on the same food, voided nothing whatever.—JAMES HEDDON.

While at a friend's once, who had his bees in a cave within 5 rods of the railroad track over which was run 6 to 8 trains daily, he requested me to go into the cave with him about train-time. Soon we began to feel the jar from the train, and as it became more distinct the bees began to roar, and by the time the train had passed the quiet of the cave was transformed to a noisy place. My friend's success in wintering bees was not good, and he believed that the cars was the cause of it.—G. M. DOOLITTLE.

Bees Swarming Out.

Query, No. 200.—What is the cause of bees swarming-out in early spring when they have plenty of honey and brood?—E. C.

It may be because the bees are weak in numbers; and have more brood than they can care for.—W. Z. HUTCHINSON.

Perhaps because the bees have died off till there are not enough to cover the brood.—C. C. MILLER.

Lack of pollen or of water, or a remnant of bad feeling from winter confinement.—DADANT & SON.

A cold brood-nest. The remedy is, to carry all weak colonies into a warm, dark room or cellar on the approach of cool nights, and return them to their places when the weather is suitable for bees to fly out. They must be carried back and forth until they become strong enough to protect the brood.—G. L. TINKER.

Want of room is supposed to be the the prime cause of swarming. It is their nature, also, and the way they multiply. The cause for swarming abnormally in early spring is not fully known, but many theories are given therefor. See any work on apiculture for the ordinarily accepted reasons.—J. E. POND, JR.

Something obnoxious about the hive, I think. I have never had such a case, but have often heard of it. We should look to it that all hives are thoroughly cleaned in the spring. Dead bees in the hive are very offensive.—A. J. COOK.

In the early spring there are but few young bees in the hive to stay with the queen when the bees take a general flight, and when she finds herself nearly alone in the hive, she may become alarmed and take wing to join the bees, and when once out with their queen the bees are as likely to do one thing as another. I once discovered a colony in a starving condition, and upon supplying their wants, giving them liquid food, so many of the workers took wing that the queen became excited and left the hive to join the bees in the air. That was a case of "swarming out." However, I have seen cases that I could not discover the cause that induced desertion.—G. W. DEMAREE.

Dissatisfaction, always. I think that it usually results from a diseased condition of the bees, caused by imperfect wintering, caused by too low a temperature, or bad food, or both.—JAMES HEDDON.

Strengthening Weak Colonies.

Query, No. 201.—What is the best method of strengthening weak colonies in early spring, when one has strong colonies to draw from?—C. E.

Keep them well contracted, and assist them with frames of brood.—H. D. CUTTING.

By adding capped brood, but not so rapidly as to result in the chilling and loss of bees.—A. J. COOK.

Give them hatching brood and young bees—especially young bees just hatching.—DADANT & SON.

Change places with the strong and the weak colonies; do it when the bees are not flying.—W. Z. HUTCHINSON.

By giving frames of capped brood as soon as they are strong enough to protect it. The mistake is often made of giving a frame of brood that the weak colony cannot cover.—G. L. TINKER.

I use the wire-box plan as given by myself for forming nuclei, in back numbers of the BEE JOURNAL.—G. M. DOOLITTLE.

I would not do it until I could safely transfer combs of hatching brood (bees), and then I would do it in that way.—JAMES HEDDON.

Draw from the strong colonies and give to the weak, being careful to give only as much brood as the weak colonies can care for.—J. E. POND, JR.

Feed the strong colonies to stimulate brood-rearing, and draw from them to strengthen the weak colonies, either brood or young bees, or both, as circumstances may dictate.—H. R. BOARDMAN.

Give them a frame of hatching brood from a strong colony, and then another after they are strong enough to take care of it. I rarely ever draw on my strong colonies to help up the weaker ones. One good, strong colony, when the early honey harvest begins, is worth more than two weak ones.—G. W. DEMAREE.

I do not believe that it will pay to draw from strong colonies in early spring. Cuddle up the weak ones as warm as you can, and if they die, the strong ones can spare material for new ones later, at less expense than they could help the weak ones early. Helping "dwindlers" is a discouraging business.—C. C. MILLER.

Number of Colonies in One Place.

Query, No. 202.—Taking the average of years, what number of colonies, in your location, kept in one apiary, do you think would yield the largest total of surplus honey?—S. J. M.

I wish that I knew. Perhaps 125.—C. C. MILLER.

I have never kept more than 100 colonies; but I am satisfied that more could be kept with profit.—W. Z. HUTCHINSON.

I have no opinion on the subject. We need light on this very question.—A. J. COOK.

This cannot be answered—some locations will take 200 colonies, others 50 or less. We do not like more than 100 in one place. Some seasons there is no end to the honey; in other seasons the flowers are scarce.—DADANT & SON.

There are in my location—say a diameter of 3 miles—about 250 colonies. My bees do as well now as they did when there was not 25 colonies in the bounds. I have reasons to believe, however, that about 200 colonies in a place is enough, taking all things into consideration.—G. W. DEMAREE.

About 100 colonies. But we have some seasons that white clover is so abundant that 1,000 colonies could not overstock the location.—G. L. TINKER.

It would depend so largely upon the locality, that no one could be a guide for another. Try and see for yourself.—J. E. POND, JR.

Of course the answer to this would be only guess-work. I have never kept more than 200 to 300 colonies in one apiary, and I have never felt quite sure that this number diminished the average yield of honey. This subject of overstocking is a very interesting one to me, and I would like to know more about it.—H. R. BOARDMAN.

About 175 colonies will secure the product of my field so as to give the most profit to the apiarist. If those about me keep 100, I can keep but 75, unless we all suffer loss.—G. M. DOOLITTLE.

That is a most important question to us who have several hundred colonies, and I should like to be able to give an answer that I could consider somewhere near correct. — JAMES HEDDON.

Distance between Apiaries.

Query, No. 203.—If you had a brother about to establish an apiary, and you wanted him located as near you as possible without materially interfering with your honey crop, how far would you want his apiary from yours?—S. J. M.

Ten miles.—G. M. DOOLITTLE.

Not nearer than 4 miles.—W. Z. HUTCHINSON.

Four miles in a bee-line.—DADANT & SON.

It would depend upon the location. If the location was a good one, one's interest would not suffer if his brother were to locate within a mile of him.—G. W. DEMAREE.

That would depend upon the size of the brother's proposed apiary. If a hundred colonies or more, I should say about 2 miles.—G. L. TINKER.

It depends much upon the size of the two apiaries proposed. If large, 4 or 5 miles; if small, very near.—H. R. BOARDMAN.

I should say about 5 miles. This is simply opinion, and may be worth very little.—A. J. COOK.

Perhaps 5 or 6 miles.—C. C. MILLER.

If the ground is level and quite open, not less than 6 miles. In some locations where broad forests and hills intervene, a less distance would thus be warrantable. I speak from careful observations taken about my own locations.—JAMES HEDDON.

So much would depend upon the size of my own apiary, the size of my brother's, and the yield of honey in the locality, that it is impossible to give an answer of any value. I do not consider the question one of any practical value, in any case; to answer fully would open up the whole matter of how many colonies will overstock a given locality. A few would do this in a poor season; how many would in a good season, no one can tell.—J. E. POND, JR.

OUR CLUBBING LIST.

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A Brief History of the North American Bee-Keepers' Society, with a digest of its 15 Annual Conventions, and a full Report of the Proceedings of the 16th Annual Convention held at Detroit, Mich., on Dec. 8 to 10, 1885. This is the title of a new pamphlet of 64 pages just issued at this office. Price, 25 cents.

This pamphlet also contains engravings of the principal honey-plants, and portraits of the Rev. L. L. Langstroth, of Ohio, and Moses Quinby, of New York; two of the pioneers who helped to revolutionize American apiculture, and usher in a new era.

King Winter.

FRANK D. HARROUN.

King Winter reigns right loyally ;
Behold his sparkling crest !
When wakes the golden eye of morn
He gleams from east to west,
And laughs to see with fiendish glee
All chill at his behest.

He hies him o'er the lap of Earth—
Nor shows her mercy now,
But blows his breath, replete with death,
Full on her faded brow ;
The shrub, the birch, the lordly oak,
In meek submission bow.

Where are the royal robes of green
That Earth was wont to wear ?
The bright plumed birds with liquid notes
That filled the scented air ?
Will these ne'er come again to thrill
Her bosom, cold and bare ?

Aye ! Lurking there 'neath heaps of snow
Sweet hidden beauties lie,
That but await the magic glance
From Summer's glorious eye,
E'er springing into life, and call
The bird from foreign sky.

Sweep on, bold, roving Winter King,
Make merry while you may !
For soon in joyous notes shall ring
The songster's roundelay,
Rejoicing with the buds and flowers
That you at last decay.

Clinton, Iowa, Feb. 4, 1886.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre ; ♀ south ; O+ east ; +O west; and this ♂ northeast; ⟜ northwest; ⊸ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

Making History---New Bee-Hives.

G. W. DEMAREE.

Rev. W. F. Clarke, one of our most fluent writers on bee-culture, and the Editor of the AMERICAN BEE JOURNAL, widely known as an able and prudent journalist, have both given their cordial opinion of Mr. Heddon's "new" patent hive. The first characterizes it as a "revolutionizing" invention, and the latter says it is "new and original." With these things before me, on the pages of the aforesaid independent bee-periodical. I take it that the discussion is open and free to all contributors. We are "making history," and surely all the facts should go to record.

As to the utility of a hive made in horizontal sectional parts, I am not without experience. I have experimented in that direction for the past six years, and I now have bees wintering in a hive made of cross sectional parts only 5⅝ inches in depth. When the bees were prepared for winter in September, they were shut down in a single sectional part of the hive, the frames being only 5½x17⅜ inches, outside measure. I have experimented quite extensively with the sectional shallow-frame cases, using them for brood-rearing, tiering them up to suit the size of the colony, and for queen-rearing, using a single sectional-case ; and I have employed them largely for taking extracted honey on the tiering-up plan. Those persons who have read my articles in the *American Bee-Keeper*, *New England Apiarian*, *Kansas Bee-Keeper*, and the *American Apiculturist*, know that I mentioned my shallow-frame system time and again ; and in the discussion between my distinguished friend, Dr. Southwick, and myself, published in the AMERICAN BEE JOURNAL, Vol. 19, pages 370 and 371, I mentioned my shallow-frame system, using it as an argument in favor of shallow frames.

With these scraps of history already gone to record, it is impossible that any hive made in horizontal sectional parts could be "new and original" at this late date. In fact the *idea* was not *new* when I commenced my experiments six years ago. The practice of tiering one "story" of a hive on another, is common to all bee-keepers —"common property." When we hive a swarm in the lower "story," or brood-department of a hive, we speak of it as a "hive ;" and when we add another story to it to give the bees more room, we still call it a "hive," because it is a hive in sectional parts. Now the mere difference in the depth of the sectional parts can never change an *old idea* into a new one.

Having shown that the "new" patent hive is not new in conception or idea, I now propose to show that in its mechanical construction there is not a single new feature about it, that is of intrinsic value.

The case to hold the frames is simply a shallow box, the chief features of which are shallow rabbets at the bottom as well as at the top, and some tin strips nailed in the rabbets to support the frames. The frames have wide end-bars, and are dovetailed at their corners. When finished, the frame is the same as the old "close end-bar frame."

As to its manner of adjustment in the case, it is a "standing frame," *i. e.*, it rests on strips of tin at the bottom of the case, instead of being suspended in the case. The frames are made as long as the inside of the case, and hence fit closely to its front and rear walls (a most objectionable feature in a warm climate); and lastly, the frames are clamped together by means of a set-screw at each end of the case.

It is proper to say that the frames are adjusted in the case so as to leave a shallow bee-space both at the top and bottom of them, and the case will work with either side down, or up. Comment is unnecessary.

Every well-posted apiarist will recognize every feature described as an "old acquaintance."

The application of a *set-screw* to a bee-hive may be new as to the *application*, but "thumb-screws" have been in use for years to clamp hives, etc. No device is more commonly used than a "set-screw."

Now, I might safely defy anybody to point out a single new feature connected with the "new" patent hive, but my purpose is simply to give the facts. There are but few independent apicultural writers, and these must "hew to the line, let the chips fall where they may." It is far more pleasant to write a "puff" that pleases, than to write words of truth that may hurt.

Christiansburg,♁ Ky.

For the American Bee Journal.

Honey-Interests of Florida.

JNO. Y. DETWILER.

Since writing my letter on page 60, I have made a trip down the river, and in my estimation the mangroves have been entirely destroyed by the recent cold wave. As a consequence, the honey-interests of the coast country are greatly damaged, and, in my opinion, will be no better than the interior of the State for years to come. Bees and fixtures are being offered for sale preparatory to leaving for more inviting fields. The tendency of property owners who have lands for sale, is to consider the damage to the honey interests as of but of one or two years' duration ; but when it is taken into consideration that the mangrove is of slow growth (the average size of the trees being about 5 inches, the result of the growth since 1835, the date of the previous frost), it becomes more serious. The dead trees of 6, 8 and 10 inches are numerous in the more isolated swamps or islands.

The damage to the bearing orange groves of the coast is considered as but slight, though some of the young wood and much of the nursery stock has been damaged, as well as the ungathered crop of oranges. I have been informed that the cocoanut plantations, as well as the pine-apple tracts of Southern Florida, have been sadly damaged, if not entirely destroyed.

The groves of the interior have suffered much more than is admitted, as it has a tendency to direct emigration to other localities near salt water protection. Take away the honey and orange interests of Florida and there is but little left for humanity to subsist upon, except the food resources of the coast and the genial climate, which in many instances prolongs life where disease has taken a firm hold upon the system.

Another cold wave may not visit Florida again for many years, and as I have found by actual experience that it does not pay to lose heart and become discouraged by reverses, I expect to remain where I am—let the damage to the honey-interests of Florida be little or great. I consider it best to state plain facts, as personal examination has warranted me in doing, let it injure whom it may.

New Smyrna,⊙ Fla., Jan. 25, 1886.

Indiana State Convention.

The seventh annual meeting of the Indiana State Bee-Keepers' Society was called to order promptly at 1:30 p.m., on Jan. 20, 1886, President Jonas Scholl in the chair, with about 70 members in attendance. The work of the Society was commenced with the payment of dues and the enrollment of new members. The reports of the officers followed, showing the Society to be in a prosperous condition. The regular dues of the members was reduced from $1, to 50 cents. A special committee, appointed at the last meeting of the Society, for the purpose of revising the constitution, reported in favor of changing from a delegate body, allowing all to become active members on the payment of dues as prescribed in the by-laws.

Mrs. C. Robbins was given a vote of thanks for the beautiful badges which she provided for the members of the Society.

President Scholl, in his annual address, after giving a kind greeting to those present, remarked as follows:

The past winter was a remarkable one, a winter of unusual severity, and caused a fearful destruction of bees in some parts of the State. While the spring and summer were in the main favorable for an increase of colonies, but little surplus was obtained, and that only in favored localities. The statistics for 1885 show a large reduction in the number of colonies and pounds of honey. With our home markets almost bare of honey, we have good reason to expect better prices for what can be produced next season. The progressive bee-keeper, however, will not concern himself so much about an increase of price for his crop, as how to produce honey at less cost, so that he can well afford to take current prices; and with the facilities and improvements now at our command, we should be able to produce honey at a fair profit, even if compelled to take lower prices than were obtained the last two years.

We all admit the superior quality of honey that is allowed to remain in the hive to the close of the honey season, when it is all capped, and thoroughly ripened by the heat of the bees. But we know also that this diminishes the yield very much. If, therefore, the same object can be accomplished by the concentrated heat of the sun, I would say, all honor to the man who will perfect an arrangement for ripening honey by solar heat.

We all rejoice to learn that the next meeting of the North American Bee-Keepers' Society will be held in this city, and now let us take the necessary steps to give a hearty welome to the National Society, which, after an absence of 13 years, returns once more to Indianapolis. Here it was organized in 1870, and met here in 1872. I would recommend that a committee be appointed to make such preparations as will insure our brother bee-keepers from abroad a hearty and welcome reception. The parent Society has been, and is yet, a power for good in the interests of bee-keeping.

EVENING SESSION.

The discussion in the evening was opened by Mr. Davis, on the subject of "Planting for Honey." He did not believe that it would pay small farmers to devote any tillable ground exclusively to honey-producing plants. He had great faith in Alsike clover, both as a honey-producer and a forage-plant, and said that bee-keepers would be helping themselves and their neighbors by inducing all farmers to plant it. His opinions were endorsed by all present who knew anything about this comparatively new clover.

Mr. C. F. Muth read an essay on "The Effects of Pollen in the Hive for Winter." He did not believe that pollen was injurious to the bees except in aggravated cases. The subject of this paper was considered in all its bearings, showing it to be a subject to which bee-keepers have given considerable thought. Mr. Muth also spoke of his trip through the South. He talked at considerable length on the possibilities of bee-keeping in Florida, and said that he thought it might be the Eldorado of the bee-keeper who worked for extracted honey, but that a peculiarity of the climate in the mangrove country—dampness—made the producing of comb honey impracticable. This led to the subject of what kind of honey, comb or extracted, was in greatest demand, and the most profitable to the producer. The facts on this subject would indicate that there was a very great difference in the kind of honey demanded, depending upon locality. The decision of the convention was that extracted honey could be produced at less than half the cost of comb honey, but that bee-keepers should produce both kinds, being governed by the demand in their own markets, as to which kind they should produce the most of. The subject was continued to the hour of adjournment.

SECOND DAY—MORNING SESSION.

The meeting was called to order at 9 a.m., President Scholl in the chair. After disposing of the usual preliminaries of the Society, Mr. Reynolds read an essay on "Early Spring Management;" calling particular attention to several causes by which colonies were likely to be diminished during early spring. Bees leaving the hive in search of water he thought was one of the most frequent causes, and advocated putting water into the hives to prevent the necessity of their having to leave the hives in search of it. Mr. Muth had tried the plan, but could see no benefit, as the colonies to which he gave water suffered losses equally with those not having the water attachment. Mr. Leaming said that Father Langstroth mentioned this subject at considerable length in his book, and believed the plan of much benefit. Mr. Bull did not believe that it was of much advantage. Bees use considerable water during early spring, but he said that the rearing of brood stimulated the bees to extra exertions, and they left the hives in search of new honey as well as for water. The Secretary had noticed that if the bees during a pleasant day got a taste of honey from the soft maple or willow, that the day following they would leave the hives in great numbers though the weather be very cold.

Mr. Cotton called attention to the fact that the next meeting of the North American Bee-Keepers' Society would be held in this city next year, and moved that a committee of five (two of which should be ladies), should be appointed by the President to confer with the Executive Committee of the National Society, and give all assistance possible in the way of making the meeting a success. Messrs. I. N. Cotton, Sylvester Johnson, F. L. Dougherty, Mrs. Robbins, and Mrs. Landers were appointed as the committee, the members of the Society pledging their hearty support to the undertaking.

Mr. Knowlton moved that a committee of three be appointed to prepare a new premium list for the Apiarian Department, and asked its adoption by the State Board of Agriculture for the next State Fair. Messrs. Knowlton, Cox and Lane were named as such committee.

The Society then proceeded to the election of officers, resulting as follows: President, I. N. Cotton, Traders' Point, Ind.; Vice-President, E. J. Howland, Indianapolis; Secretary, Frank L. Dougherty, Indianapolis; Treasurer, Mrs. E. Stout.

Miss Eva Scholl read an essay on "Winter Protection of Bees," which was well received, and showed the writer's familiarity with the subject in hand. A very large majority of the members coincided with the main features of the article, offering evidence of experience that much had been gained in the way of successful wintering.

Mr. Mason read an essay on "The Most Desirable Quality of Bees," giving the preference to Italians. Mr. Knowlton said that there was but one true race of the yellow bees, the others being offshoots from the Italians. The Secretary said that there was sufficient evidence in favor of the Italians, as all of the most practical bee-keepers in the country reared them and did all in their power to keep them pure from any stain of the native black bees.

Several valuable essays were followed with appropriate discussions full of valuable information to bee-keepers, after which the convention adjourned. F. L. DOUGHERTY, *Sec.*

Any person not a subscriber, receiving a copy of this paper, will please consider it an invitation to become a subscriber to it.

Read at the Maine Convention.

Bee-Keeping in Maine.

SECRETARY'S REPORT.

It again becomes my duty as Secretary of the "Maine State Bee-Keepers' Association," to present the annual report. We number, at the present time, 111 members—92 gentlemen and 19 ladies—showing a gain of 16 members during the year. At the last regular meeting, the manner of gathering statistics, relating to the bee and honey industry of the State, was left with the President and Secretary, who, after due consideration of the matter, thought it better to gather the statistics by towns, rather than from individual bee-keepers, as had been the custom heretofore. Accordingly cards of inquiry were sent to nearly every city, town and plantation in the State. While the returns have not been so full and satisfactory as we would have liked, still enough have been returned to give us a better idea of the extent of the bee-keeping industry in the State than we have had heretofore.

From the reports received, I have made up the following estimates: Number of persons engaged in bee-keeping in the State, 2,360; number of colonies of bees in the spring of 1885, 13,393; number in the fall of 1885, 22,597; number of pounds of honey taken during the season of 1885, 384,503, or 192¼ tons; number of pounds of wax taken, 3,304; value of bees in the State at the present time, including hives and fixtures, $225,970; value of the honey crop of 1885, at 15 cents per pound, $57,675.45; value of wax at 30 cents per pound, $991.20; making the total value of the product of the busy bee in the State, during the past year, $58,666.65.

I also gather the following items of interest, from the reports received: There are about 200 towns in the State in which no bees are kept; there are 25 persons engaged in bee-keeping in the town of Dexter, 17 in Oxford, and 13 in Bluehill. There are 500 colonies of bees in the town of Caribou, 200 in Poland, 162 in Clinton, and 160 in Columbia. There were 10,000 pounds of honey gathered in the town of Caribou; 5,250 in Clinton, and 3,000 pounds in Poland, the past season.

The early part of the season of 1885 was very unfavorable for bees. Many colonies that had succeeded in getting through the winter, died, or were greatly reduced in numbers in the months of April and May. The month of June was more favorable, considerable surplus honey having been taken from the fruit and raspberry blossoms. In many sections of the State clover was winter-killed badly, and the weather being unusually wet during its period of bloom, therefore the crop of clover honey was light. A very large crop of honey was gathered from basswood, and in the wet part of the State, a large crop was gathered from fall flowers. The season, upon the whole, was favorable for the production of honey and increase of bees.

The State Agricultural Society offered quite liberal premiums for a display of bees, honey and apiarian implements, at their annual Fair at Lewiston. Although the numbers of exhibitors were not so large as could have been wished, there was a very creditable display, being the largest, by far, ever shown in the State.

The interest in bee-keeping is increasing with each succeeding year; also the facilities for gaining a practical knowledge of the business. There are six flourishing bee-keepers' associations in the State, one having been formed at Brunswick during the the past year, known as the "Maine Apicultural Society."

WM. HOYT, *Sec.*

For the American Bee Journal.

The Season of 1885.

F. R. MANNING.

My bees came through the past honey season in good condition, giving me an average of 67 pounds of honey per colony, spring count, in one and two pound sections, after leaving plenty of honey in the brood-chambers for them to winter on. On Dec. 28, I carried them into the cellar, and prepared them for winter as follows: I laid ½-inch square strips crosswise of the brood-frames, then spread a burlap cloth over that, and covered the cloth with about 2 inches of oat-chaff. I placed the hives one on top of the other, with a 4-inch block between them, to give an air-space. I have them piled 5 hives high. That is the way I wintered my bees last winter, and they all came out in good condition. I am wintering 33 colonies, 29 of which are in good condition, and strong with bees, and 4 are weak in bees, but have plenty of honey.

Four years ago I started in the bee-business with what I considered good Italian bees, but now they are crossed so much with the German and black bees, that there are very few Italians among them. As all my neighbors have bees, the past season I allowed mine to increase by natural swarming. I have about decided to dispose of my present stock of bees and half-filled sections, and start in anew in the spring with a pure strain of bees, as I will then move my apiary where there will be no other bees within 3 miles of mine.

I disposed of my honey crop in my home market, getting 15 and 20 cents per pound for it, and I could have sold 1,000 pounds more if I had had it. I do not say that my honey is better than anybody else's, but those who bought honey of me said that they could never eat honey until they had tried mine.

The mercury was 24° below zero the past 2 mornings, and I fear that the bees that are on the summer stands will suffer if they are not thoroughly packed.

Reynolds, Ills., Jan. 25, 1886.

For the American Bee Journal.

Nebraska State Convention.

The Nebraska State Bee-Keepers' Association met at Lincoln, Nebr., on Jan. 13, 1886, with all the officers present and a goodly working number of old members in attendance. The convention was called to order by President Von Dorn.

Owing to the late snow-storm, the regular order of business was deferred until the next day, so as to give members, that might be delayed, an opportunity to have a voice in the special proceedings.

The remainder of the day was spent in discussing a hive that was presented by James Jardine, of Ashland, after which the subject of wax-rendering and other minor points of the industry were discussed.

The meeting then adjourned until Thursday morning.

On Jan. 14, at 9 a.m., the President called the convention to order, which proceeded to act upon the deferred business. The minutes of the last meeting were read and approved.

The committee appointed at the last annual meeting to secure the passage of a law to prevent the spreading of foul brood, and if possible extinguish it from the State, reported. By request the law as passed, was read, and thought not to be adequate. Immediately followed a lively discussion on foul brood, after which the convention adjourned until the afternoon.

At 1 p.m. the convention was called to order, and the subject of bees puncturing grapes was discussed.

Other subjects of less interest were also discussed during the afternoon, when the convention adjourned until 7:30 p.m.

At the appointed time the evening session was called to order, and Messrs. R. E. Leach, of York, James Jardine, of Ashland, and E. W. Whitcomb, of Friend, were appointed as a committee on arranging a suitable premium list on bees and honey to be presented to the State Agricultural Society.

Mr. E. W. Whitcomb was recommended to the Agricultural Society of the State of Nebraska, as a suitable person to superintend the Apiarian Department at the next annual State exhibit.

The election of officers for the next term resulted as follows: President, W. F. Wright, of Johnson county; Vice-President, T. G. Hodges, of Saline county; Secretary, H. N. Patterson, of Richardson county; and Treasurer, R. E. Leach, of York county.

Immediately after the election of officers, the thanks of the Association were voted to the retiring officers for past services. The remainder of the evening was spent in discussing the subject of wintering bees, after which the convention adjourned to meet at 9 a.m. the next day.

On Jan. 15, at 9 a.m., the convention was called to order by President Wright. T. G. Hodges, E. W. Whitcomb and R. E. Leach were appointed to investigate the probability of foul brood existing along the line of Filmore and York counties; whereupon the following resolution was unanimously adopted:

Resolved, That this Association request the Governor to notify the inspectors that have been appointed under the foul-brood law, that they must report the inspection of all colonies in the infected districts under their supervision, by the 10th day of May next, in default of which their commission will be cancelled and others appointed in their places.

The remainder of the session was spent on miscellaneous subjects, and the convention then adjourned to meet in Lincoln for their next annual meeting. H. N. PATTERSON, *Sec.*

For the American Bee Journal.

Discouraging Brood-Rearing.

8—J. A. GREEN, (85—100).

I fully agree with Mr. Dadant, in his communication on page 60. In my locality, the bee-keeper who would discourage brood-rearing in his hives 15 or 20 days before the beginning of the honey crop, would be very apt to be unsuccessful.

Here, sweet clover often yields a great deal of honey after white clover and basswood have ceased blooming. There is also considerable uncertainty as to the time of blooming of both white clover and basswood. Moreover, any one of these plants is liable to fail to yield honey while the others produce it freely. Ordinarily only a small part of my honey crop comes from basswood, the other sources of supply being white clover, sweet clover, and in the fall, heart's-ease. Last year almost all of my honey was obtained from basswood, and this bloomed unusually late. If I had stopped brood-rearing 15 or 20 days before the usual time that white clover blooms, it would take very few figures to represent my honey crop of last year; (not so very many, as it is.)

Still worse off would have been a bee-keeper only 12 miles from my apiary, who got no white clover or basswood honey, but had a good yield from sweet clover after my honey was all gathered, although there is plenty of sweet clover within reach of my bees. This illustrates well what a difference there is in localities. Again, if I expect to get any fall honey—and sometimes our heaviest yield is in the fall—there must be no diminution of brood-rearing during the earlier yields, else there will not be enough bees to gather this crop.

Let no one be led into the system of discouraging brood-rearing until he has by long experience made himself familiar with all the sources of honey-supply in his locality. While a careful man might carry it out successfully where there is but one short honey-flow, I have never seen the time from the first of June to the last of September when I considered that my hives were too full of either brood or bees.

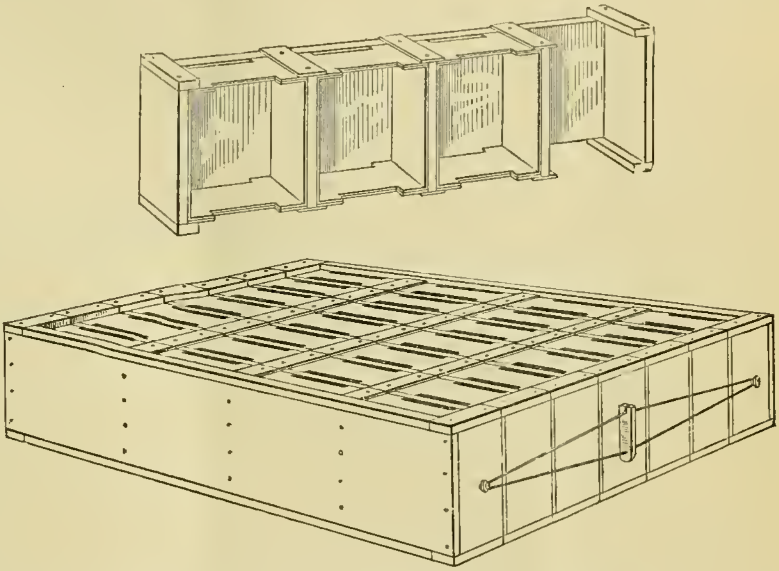
Dayton,♁ Ills.

For the American Bee Journal.

A New Surplus-Case.

J. M. SHUCK.

The engravings show a new surplus honey-case devised and used by me during the last season. It is sectional, permanently separatored, and is invertible. There are no top or bottom bars in the way to hinder, when sections are to be removed. The sections have the false tops and bottoms, peculiar to all my cases, to protect them from the travel of the bees; in fact, the bees can touch the sections nowhere, except on the inside. I think that no other method of separatoring in use is equal to this. New inventions are plentiful, but practical bee-keepers will criticise closely, in order to be able to choose the best.



Des Moines,⊙ Iowa.

For the American Bee Journal.

Queen-Introduction---An Incident.

REV. WEISEL BEALE.

Mr. John Hewitt's article on the introduction of queens, page 54, reminds me of the following touching incident of filial fidelity in the bee; which also confirms his system of introducing queens:

Last fall, while putting my colonies in order for wintering, they were carried, one by one, a few yards from the summer stands, and the frames removed, boxes cleaned, etc.; the bees adhering to one hive were poured on the ground with the scrapings from the hive, and the queen with them. Shortly after the colony had been replaced upon its stand, robbing began, thus indicating something wrong with the queen. Her hive was closed until sundown, and visited early the next morning—a light frost having fallen—when it occurred to me that the queen might be found where the bees had been poured out the morning before—about 24 hours previous—and there to my amazement was a cone-shaped cluster of bees as large as a tea-cup, and in the centre of it was the queen, cold and stiff. Upon taking her to a fire, in a few minutes she was restored to activity, and on lifting the cushion over the bees and presenting her, the first thing, even before she left the fingers, a bee "gave her to eat," and thereupon, almost instantly, a joyful hum passed through the hive; and quicker than it can be told, dead bees were carried out, and defensive warfare against robbers began.

The fidelity exhibited in protecting their mother on that frosty night, and the joy manifested on her safe return home, are worthy of our imitation.

New Madrid,∽ Mo.

For the American Bee Journal.

Introducing Queens, etc.

FRED BECHLY.

Mr. Hewitt, on page 54, says: "I may be pardoned for saying that this system of mine is infallible." Some years ago I had a colony of bees that had been queenless for a month or more, and had become weak in bees, with no brood or eggs, and no sign of laying workers, and at a time when honey was scarce and robbers were plentiful. I took a nice, large hybrid queen and let her run in at the hive-entrance, and the bees balled her at once. A few minutes later I looked to see what they were doing, and found several bees dragging her out, dead, with one bee in front with its sting through her tongue. I then gave them another queen by caging her over night, and she was well received. It would seem that although Mr. Hewitt's plan is a very good one, it is not entirely "infallible."

LAYING WORKERS.

These are generally considered a great pest, but I think that a laying worker is not regarded as a queen by other bees, nor are they themselves unwilling to accept a queen, but it looks rather as though a few eggs and a little brood leads them to believe that they are not queenless. If I should find any the coming season, I shall try Mr. Doolittle's plan, by depriving them of their comb, caging a queen with them, and placing them in the cellar over night. Let others who may have laying workers in their apiaries try the plan and report their experience in the BEE JOURNAL.

Searsboro,⊙ Iowa.

Convention Notices.

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m. M. E. DARBY, *Sec.*

☞ The New Jersey and Eastern Bee-Keepers' Association will hold their ninth semi-annual convention at Cooper Union (Room 22) in New York City, on Wednesday, March 10, 1886, at 9:30 a.m. All who are interested in bee-culture or honey are respectfully invited to attend. We expect a large delegation from the Philadelphia Association to meet with us, and it promises to be one of the most interesting as well as instructive conventions that this Association has ever held. A special invitation is extended to ladies, well knowing that they are by no means a small factor in our industry. Beginners, it is well known, will learn more by attending one good convention than a year of practical experiments will teach them. All are requested to bring something to exhibit, and if you cannot come, send us an essay to read on some live subject. W. B. TREADWELL, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ Owing to the inclemency of the weather, the meeting of the Marshall County Bee-Keepers' Association was postponed from Jan. 16, 1886 to Feb. 20, 1886; at which time the same programme will be carried out as was intended for Jan. 16.

J. W. SANDERS, *Sec.*

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, **5** cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

Local Convention Directory.

1886. *Time and place of Meeting.*

Feb. 16-18.—New York State, at Rochester, N. Y.
F. C. Benedict, Sec., Perry Centre, N. Y.

Feb. 17, 18.—Cedar Valley, at Laporte City, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.

Feb. 17, 18.—E. Iowa & W. Ills., at Davenport, Iowa.
Wm. Goos, Sec., Davenport, Iowa.

Feb. 20.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Feb. 24.—Oneida County, at Rome, N. Y.
O. J. Evans, Sec., Camroden, N. Y.

Mar. 10.—N. Jersey & Eastern, at N. Y. City, N. Y.
W. B. Treadwell, Sec., 16 Thomas St., New York.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Bees Wintering Nicely.—Frank A. Eaton, Bluffton,∽ O., on Feb. 4, 1886, says:

The bees are wintering nicely so far, although the weather is continuously cold; but if it continues much longer those colonies on the summer stands will be in great danger.

Another Cold Week.—G. M. Doolittle, Borodino,⊙ N. Y., on Feb. 6, 1886, says:

We are having another cold week here, the mercury ranging from 10° to 20° below zero, with a searching wind. If Prof. C. C. Blake's promised warm weather does not come soon, there will be a fearful loss of bees here, from those wintered on the summer stands. In fact some have already died in apiaries near here, and many more are besmearing their hives. I have lost one colony, and 4 or 5 are getting uneasy. Those in cellars are nice.

[Prof. Blake's promised warm weather arrived in Chicago on time on the 7th, and the bees have been flying several days, giving them an enjoyable and health-giving time.—ED.]

Condition of Bees in Kentucky.—Rev. L. Johnson, Walton,♂ Ky., on Feb. 9, 1886, writes:

Dead, dead, dead—such is the sad record I am making all through my apiary. Bees had not a day in which they could leave the hive from Jan. 2 until Feb. 8, much of the time the mercury being below zero, and twice as low as 14° below. Out of 67 colonies in the fall, I have already lost 20, and the end not yet. I think that fully one-half of all the bees in this part of the State will be lost before spring. Of every colony lost, so far as I have examined, there still remains much honey; in many instances within one inch of the bees. The cold was so intense that they would not leave the cluster, and when all was consumed that they covered, starvation ensued. Some of the combs are badly smeared, and many of the bees distended to bursting. Yesterday and to-day, Feb. 8 and 9, the weather has been bright and warm. The bees have had a grand time, and we may hope that the worst is over. The Cyprians have all yielded to the frost, and I am at last rid of them. I hear considerable complaint among farmers who have kept a few colonies of black bees, which indicates that they have fared badly. So, after all, these disastrous winters we are having may have a beneficial effect in driving out shoddy bee-keeping, and demonstrating the "survival of the fittest."

Very Cold Weather.—J. W. Sanders, Le Grand,⊙ Iowa, on Feb. 4, 1886, writes:

We have had very cold weather and lots of snow. It was 32° below zero this morning, but it was some warmer through the day. The mercury has dropped down again this evening to 10° below zero. The bees that were left out-doors will stand a poor show where unprotected. The temperature in my cellar is about 40° above zero; I would like to say 45°, but I hope that all will be well. My cellar is dry.

Bees in Good Condition.—W. J. Cullinan, Mt. Sterling,+○ Ills., on Feb. 7, 1886, says:

We have just passed through as steady a month of solid Old Winter as I ever remember to have experienced; but to-day it is thawing sharply with the mercury at 50° Fahr. My bees had a fine flight to-day—the first in two months—and they are in good condition, so far as I could ascertain. I placed them against the yard fence on Dec. 1, and packed in straw. I think that I shall try cellar-wintering another year.

Space Between Brood-Combs, etc.—A. J. F., of Columbiana County,♂ O., asks the following questions:

1. Where box-hives are used with stationary bars ⅞ of an inch wide, would not ⅜ of an inch space between the combs for breeding purposes be just as good or better than ½ inch or more? In a hive 14 inches wide, instead of holding 10 combs with ½ inch space between them, it would hold 11 with ⅜ of an inch space between, thereby making less lurking-space for the bees in the brood-chamber in the honey harvest. 2. Would there not be considerable gain in the force of bees in the surplus boxes? 3. Would there not be sufficient room in ⅜-inch space between the combs for a sufficient amount of bees to collect in a cool spell of weather to pro-

tect the brood? 4. Would there not be a less liability of building brace-combs between the top-bars and honey-boxes in ⅜-inch space with ⅞-inch combs, than in a wider space? 5. Would not the queen be more liable to breed to the top of the top-bars in such combs, than she would in thicker ones? 6. Would an entrance ⅜x14 inches be large enough for ventilation in the warmest weather for a strong colony of bees in a hive of the above style, of about 3,000 cubic inches? If not, how large should it be?

[1. They have been so used without serious harm resulting. In some respects they are better, and in some worse than when placed farther apart.

2. Undoubtedly it would have that tendency.

3. Analogous to the above, the wide-spaced combs would have the advantage in this direction.

4. I think there would, but, after all, the difference would depend mainly upon other causes.

5. No doubt slightly so, but to no such degree of advantage as we gain by reversing or interchanging.

6. If the hive was kept shaded (as all should be), such an entrance does very well. I use and prefer 1⅜-inch space for each comb to occupy, adding allowance for the extra outside space. —JAMES HEDDON.]

The Detroit Convention.—Mr. L. C. Root, of Mohawk, ♂ N. Y., on Feb. 6, 1886, writes as follows:

MR. EDITOR:—I have received a copy of the report of our North American Bee-Keepers' Society in pamphlet form. The thanks of every member of the Society are due you for the very full and accurate report you have given. At the price you offer it, you should be able to place it in the hands of every bee-keeper in North America. One thing may truly be said, and that is, that much of the spirit of that meeting cannot be communicated. I shall ever be grateful that I was permitted to be present.

Infallible Queen-Introduction.—O. N. Baldwin, Clarksville, ♂ Mo., writes:

I have read Mr. Hewitt's article on this subject, on page 54, and it is good; yet I think that I have a simpler way, and with me it has never failed. I believe that it is as Mr. H. says, "infallible"—not only for laying queens but also for virgin queens. I would like to hear reports from others after they have used it. It is as follows: The hive of the colony to which I wish to introduce the queen is removed from its stand, closed up, and another hive is put in its stead on the stand. In this hive I put some empty combs or foundation, and a little honey. All this must be done in the middle of the day when the most of the old bees are in the field, and when they return they will stay with the hive and cluster on the combs. I leave them in this condition for 24 hours, then let the queen run in at the entrance and she will be accepted. If a virgin queen is being introduced, leave them alone for 24 hours more, till the old bees get used to her, then take out the old queen and move the hive back where it was; then in a couple of hours all can be safely put into one hive. If a laying queen is being introduced, as soon as she is put in, without waiting 24 hours, take out the old queen, and as soon as the bees miss her, in 1 or 2 hours, put them all together. I have lost only 3 queens in all my experience, and I have introduced a great many, but I have never lost one by the above plan.

Report for 1885.—Marshall Swain, Edwards, ♂ N. Y., on Feb. 7, 1886, says:

I began in the spring of 1885 with 3 colonies of Italian bees, which I increased to 12 colonies during the season, by natural swarming, and obtained 40 pounds of comb honey, that I sold for 20 cents per pound. I worked my bees entirely for increase. I have only 12 colonies, and they would be of little use to me without the AMERICAN BEE JOURNAL.

Bees Having Good Flights.—H. M. Seeley, Harford, ♂ Pa., on Feb. 9, 1886, says:

Bees are wintering finely. They had a good flight on Jan. 2, and they are also out to-day in large numbers, and spot the snow a little.

Sugar Syrup for Winter Stores.—Dr. C. C. Miller, (179—340), Marengo, ♂ Ills., on Feb. 10, 1886, says:

Mr. Highbarger's inquiry on page 91, is to the point. I fed my bees about 1,700 pounds of granulated sugar for winter, or just as many pounds as the surplus they gave me. I did not mean to misrepresent, but withholding the above certainly does not give the whole truth.

Bees Wintering Well.—2—Jno. E. Heard, (36—54), Pikeville, ⊸ Tenn., on Feb. 8, 1886, writes:

As we have had such cold weather I thought that my bees would all be killed, but I find them all right. My hives are all two-story with Gallup frames; some of them are only 12 inches wide, others 12x13½, and others 12x18, clear, inside. I have them put on flat rocks without any bottom-boards, and the bees can go in and out at many places around the hives, as the rocks are not smooth. I have nothing over or around them except enameled cloth on the frames. The mercury was 10° below zero many days together, only last week it was 2° below, but now it is 74° above zero, and the bees are out as if they were swarming. I have to cover some hives, as the bees began to rob one another. As the snow began to thaw yesterday, myself and daughter cleaned out the dead bees from every hive, I tipping back the hives and she sweeping out the dead bees. I noticed that many colonies wintered in the upper story, while others stopped below. We did not get as much as a tea-cupful of dead bees at any one hive, and neither can I see any signs of disease among them.

Experience in Bee-Keeping.—J. L. Anderson, Lawrence, ♂ Ills., on Feb. 4, 1886, writes:

I wonder whether there is any other side to bee-keeping except the bright side. Are there any, except Dr. Miller, that get less than a small fortune from every colony of bees that they keep? If there are, let them hold up their hands. As I do not see any except my own hand, I will give my report. Two years ago I put 82 colonies into my cellar, and the next spring I took out 45, the balance having died with the diarrhea. The 45 were increased to 70, which I put into the cellar one year ago last Nov., and in the spring of 1885 I took out 36 colonies, which I increased to 68, by both natural swarming and division, and secured 1,000 lbs. of honey. Comment is unnecessary. The present prospect for honey the coming season is not very flattering. The mercury was 25° below zero this morning, and has been below that point for several days; also, the snow is from 24 to 30 inches deep.

Bees Flying.—F. A. Gemmill, Stratford, Ont., on Feb. 9, 1886, says:

The weather being fine to-day, the bees in this vicinity have had a fine flight, the first since their winter confinement of 3 months. No doubt it gladdened the hearts of all bee-keepers here, as all those wintered in chaff hives gave no signs of disease, and, in fact, spotted the snow (on which there was a fine crust) little if any. Three of my weakest colonies, which are in the cellar as an experiment, I did not disturb, as they seem to be in such good condition that I concluded to test the cellar thoroughly, in order to ascertain whether I can utilize it for next year's wintering.

Wintering Finely, etc.—T. C. Davies, Pittsburgh, ⚲ Pa., on Feb. 9, 1886, writes:

Bees are wintering finely, with me, so far. Yesterday was a fine, sunny day, but to-day it is warm and beautiful, and the bees are having a fine flight. In all of my 40 colonies packed in chaff on the summer stands, they look strong and healthy. The two nuclei that were kept in the cellar during the last cold spell, are as bright as gold. Last season was a poor one here on account of the failure of white clover, but every thing looks very encouraging for next season. It seems that I must get some of the new reversible hives. That hive-fever is catching. I am convinced that some plan different from the two-story wide-frame plan, to hold the sections, is needed in this locality. I have used cases, but I never have liked them for many reasons. I have been dreaming for the last 3 years about a one-story, wide reversible frame, but I have never seen anything that came near to it until I was in the apiary of Mr. D. R. Jones, of Iowa, a year ago last August. He had something very near it, but having them set in a case, *a la* Heddon, it seems to me exactly fills the bill. I shall be very happy to try them next season.

The Air Alive with Bees.—E. F. Smith, Smyrna,⊙ N. Y., on Feb. 11, 1886, writes joyfully as follows:

After so much very cold weather we have just had three of the finest days for bees to fly that I ever knew at this time of the year. About 40 colonies had a flight on the 8th, but on the 9th and 10th they all (76) came out and carried everything by storm: the air was alive with bees, and the roar could be heard several rods. I also took 25 colonies from the cellar on the 9th, and they had a cleansing flight. These latter were returned to the cellar at night. No bees got chilled by falling on the snow. Bee-keepers are rejoicing.

Misrepresentation, etc.—17—J. M. Valentine, (165), Carlinville.⊙ Ills., on Feb. 3, 1886, writes:

My bees appear to be doing well so far this winter. They were in good condition when stored away in my bee-house. I was in the bee-house last evening for the first time this winter, and there was only the sound as of rippling waters. As a member of the Bee-Keepers' Union, I would say, put the Rev. Mr. West through, unless he retracts and publishes an apology for his bogus honey articles, or proves them true, if there is sufficient ground for an action. It is high time that the publication of such falsehoods were stopped. I do not think that the funds of the Union could be used for a better purpose.

Recipes for Honey-Cakes, etc.—Dr. A. B. Mason, of Wagon Works,⊙ O., on Jan. 28, 1886, writes:

My bees are in splendid condition, all quiet and happy. They are consuming but little honey this winter, so far. I examined a few colonies a few days ago, and found that they had not eaten a pound of honey. The following are recipes for making honey-cakes, that have taken premiums at our Tri-State Fair: To 3 eggs well beaten, add 1½ cupfuls of extracted honey, 1 cupful of sour cream or rich butter-milk, ½-tea-spoonful of soda, and 3 cupfuls of flour, to which has been added one large tea-spoonful of baking powder. Bake it in jell pans, and put it together with the following lemon paste: In the juice of one lemon dissolve 1 table-spoonful of corn-starch, pour on ½ cupful of boiling water, ½ cupful of honey, and 1 table-spoonful of sugar. Another: 1½ cupfuls of extracted honey, ⅔ cupful of butter, ½ cupful of sweet-milk, 3 eggs well beaten, 3 cupfuls of flour, 2 tea-spoonfuls of baking powder, 2 cupfuls of raisins, and 1 tea-spoonful each of cinnamon and cloves.

Adopting New Hives, etc.—O. P. Miner, Taylor Centre.⊙ N. Y., on Feb. 6, 1886, writes:

I am puzzled to know whether to adopt the reversible frame or the reversible hive, or to continue using the standard Langstroth hive. In the spring of 1884 I purchased one colony of Italian bees; the season was a poor one for honey in this locality, and in consequence I received no surplus, but increased my number of colonies to 3. In the fall of 1885 these colonies were in chaff hives, the two new colonies having their hives hardly half filled. I fed them a little in the fall, and they wintered nicely. The past season they increased to 6 colonies, and produced 120 pounds of comb honey; but one absconded. At the present writing they are alive, and so far as I know they are doing well. We are having another cold spell now, the mercury being 20° below zero.

[We must caution all to be very slow in changing hives or fixtures. The Langstroth (or any good hive) will answer, and beginners especially should carefully avoid needless expense. When new hives are necessary for increase, to indulge in a trial of a new kind would be admissible, but do not throw away a good hive or fixture for a new kind, simply because it is *new*. It is too expensive a luxury. Be cautious and careful, if you would succeed!—ED.]

Bees all Right.—Christian Schrier, Peotone,♂ Ills., on Feb. 12, 1886, says:

My bees thus far are wintering finely. They had a good flight on Feb. 10, after 70 days of confinement to the hives. They are on the summer stands packed in straw, with boards for a roof to keep the hives dry. I leaned boards up against the fronts of the hives to protect the entrances from snow and wind. I found very few dead bees on the bottom-boards.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Feb. 15, 1886. }

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings [illegible]@8c. per lb.

BEESWAX.—24@26c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We note an improvement of sales of honey the past week, but prices continue to rule low. We quote as follows: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—The demand is extremely slow for extracted honey. Manufacturers seem to have taken a rest. There is only a fair demand for honey in glass jars, and for comb honey. Prices are unchanged and nominal, with occasional arrivals and a large stock on the market. We quote extracted honey at 4@8c., and choice comb honey at 12@14c., in a jobbing way.

BEESWAX.—There is a good home demand for it. We pay 25c. per lb. for choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market continues about unchanged, except that stocks are somewhat reduced, and possibly a little firmer feeling on extracted honey. The demand, however, is not heavy for this time of the year, and we cannot expect any better prices, as no one seems inclined to hold, and concessions are made in the buyer's favor. Choice 1-lb. sections of comb honey, 15@16c; 2-lbs., 12@14c. Extracted, 5@7c., according to quality.

BEESWAX.—It is in very light supply, and it would bring 22@25c. for good average grades.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—The sale for honey for the past month has been as light as we have ever known it, and prices are weak. One-pound, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10@12½c.; amber, 7@8c. Extracted, white liquid, 5¼@5½c.; light amber colored, 4½@4¾c.; amber and candied, 4¼c.; dark and candied, 4@4¼c.

BEESWAX.—Quotable at 23@25c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is well supplied with comb honey and prices have declined. Best white in 1-lb. sections, 14c.; honey in larger sections can be bought for less.

BEESWAX.—23@25c.

M. H. HUNT, Bell Branch, Mich.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office in parts. Price, $3.00.

◆

Cash in Advance is the rule, but no longer than six months of grace can be allowed on the small sum of $1.00. Subscriptions may commence at any time, and discontinuances may be ordered at any time, when arrearages are paid up.

◆

Wire Nails have advanced in price, as will be seen by quotations on page 111, last column.

◆

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

◆

All the Numbers from the beginning of the year are sent to new subscribers, unless otherwise ordered.

◆

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19⅜x14½—Price 25 cents each.

◆

When renewing subscriptions please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

◆

Extracted Honey.—Any one having white extracted honey for sale, are invited to correspond with us. We are paying 7 cents per lb. for it, delivered here.

Advertisements.

WANTED.—Two young men to work with bees. Three hundred colonies—27 years' experience. Address, **S. I. FREEBORN,**
4Atf ITHACA, WIS.

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo.
4A1y

(ESTABLISHED 1864.)

BEE-SUPPLIES. Wholesale and Retail.

We furnish EVERYTHING needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send your address on a Postal card, and we will send you our Illustrated Catalogue free. **E. KRETCHMER,**
6Ast 14Ctf COBURG, Montgomery Co., IOWA.

IXL EXTRACTORS.

FOR 2 Langstroth, American, or Gallup frames, with gate—**$6.50.** Machines for any size of frames made to order. **Cold-Blast Smokers,** postpaid, **$1.00.** **W. C. R. KEMP,**
7D4t ORLEANS, IND.

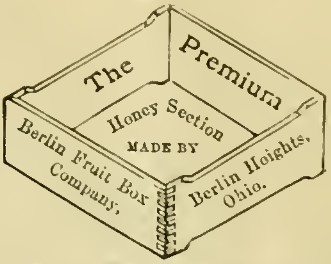
---

100 COLONIES
OF
ORANGE-COLORED ITALIANS
AND
WHITE-BANDED ALBINO BEES
FOR SALE.

THOSE in want of Bees, Queens, or Apiarian Supplies will do well to send for my 26th Annual Price-List before purchasing. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
COLERAINE, MASS.

N.B.—The best testimonial I can give, is that my trade has more than doubled in the past 3 years.
7Dtf



AWARDED First Premium at Michigan State Fair in 1884; and and again in 1885 at the Inter-State Fair held at St. Joseph, Mo. Prices greatly reduced. SPECIAL RATES on large lots Address as above for price list of Apiarian Supplies and Berry Packages. 6A3t

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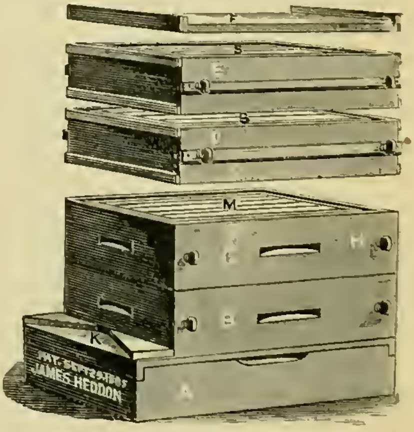
The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cap, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cap; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete. The same ready to nail, $2.75. For further particulars send for our new Illustrated Catalogue for 1886.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.,** a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,

J. P. H. BROWN.
7D10t AUGUSTA, GEORGIA.

BROOD-FRAMES.—C. W. Dayton, Bradford, Iowa, will furnish first-class brood-frames of any size, at $1.00 per 100, ready to nail; and will take honey and beeswax in payment for the same.
7Dtf

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

NOTICE.—For $3.00 I will mail direct, Frank Cheshire's great scientific work now publishing in parts, "Bees and Bee-Keeping."—Arthur Todd,—Dadant Foundation Depot—Germantown, Pa.
6A4t

1886
GREGORY'S
SEED
CATALOGUE
1886

FAIR AND SQUARE DEALING.

Believing that if a man has dealt squarely with his fellow-men his patrons are his best advertisers, I invite all to make inquiry of the character of my seeds among over a million of Farmers, Gardeners and Planters who have used them during the past thirty years. Raising a large portion of the seed sold, (few seedsmen raise the seed they sell) I was the first seedsman in the United States to warrant (as per catalogue) their purity and freshness. My new Vegetable and Flower Seed Catalogue for 1886 will be sent **FREE** to all who write for it. Among an immense variety, my friends will find in it (and in none other) a new drumhead Cabbage, just about as early as Henderson's, but **nearly twice as large!** **James J. H. Gregory, Marblehead, Mass.**

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

12,000 SOLD SINCE 1876.

13th Thousand Just Out!

10th Thousand Sold in Just Four Months!

4,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Cly Agricultural College, Mich.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

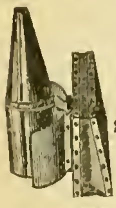
MANUFACTURERS of the **BRISTOL Bee-Hive,** the Standard Hive of Vermont, **Section Honey-Boxes,** all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers, Shipping Crates,** Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for Illustrated Catalogue and Price-List. 46D12t

Bee-Hives and Bee-Supplies,

QUEENS AND NUCLEI.

WE are now ready to fill all orders promptly, at low prices, and guarantee our goods. Send for Price-List free.

R. J. MILLER & CO.,
2D6t NAPPANEE, IND.



Bingham Smokers

AND

HONEY-KNIVES.

Send for Circulars.

Bingham & Hetherington,
ABRONIA, MICH.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE HIVES,

One-piece Sections, Section-Cases, Frames, &c., of superior workmanship.

SMITH & GOODELL,

Manufacturers and dealers in Apiarian Supplies and Barrel Churns. Send for price-list.

Rock Falls, Whiteside Co., Ills.
51D6t.

THE VICTOR HIVE

IS pronounced by competent apiarists to be the Best Hive for comb honey. It is operated on a new principle, the passage-ways being continuous through perforated zinc to the sections. Our dovetailed White Poplar Sections, with or without side passages, cannot be excelled in accuracy or smoothness. They are as nearly perfect as can be made. Sample of the new sections for 2 one-cent stamps. Catalogue on application.

Address, **DR. G. L. TINKER,**
Dtf NEW PHILADELPHIA, OHIO.

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to

CHAS. F. MUTH & SON,
Freeman & Central Ave., - CINCINNATI, O.

P.S.—Send 10c. for Practical Hints to Bee-Keeper

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Entrance Feeders, Top and Bottom Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

J. M. SHUCK,
DES MOINES, IOWA.

10A1y

1886. ALLEY'S 1886.

Combined Drone and Queen Trap.

A perfect non-swarming arrangement. Send and get them by the quantity, in the flat, and sell to your bee-keeping friends. Every bee-keeper will purchase one or more who examines them. Send for wholesale prices. Circulars free.

HENRY ALLEY & CO.,
51Dtf. Wenham, Essex Co., Mass.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEESWAX.

We pay **24c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Given's Foundation Press

THE GIVEN PRESS stands in the **front rank** for manufacturing **FOUNDATION** in **Wired Frames,** as well as foundation for **SECTIONS.** Without a dissenting voice, all of our customers affirm its superiority.

Send for Circular and Samples.

J. R. CALDWELL & CO.,
1ABtf HOOPESTON, Vermillion Co., ILL.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

G. B. LEWIS & CO.
51Atf. **WATERTOWN, WIS.**

MAULE'S GARDEN SEEDS

Cannot be Surpassed. New Seed Catalogue for 1886. *Free to all.* Best published. Over 225,000 copies already mailed. **You ought to have it.** Send your address at once on a postal card for a copy to

Wm. Henry Maule, 1738 Filbert Street, Philadelphia, Pa.
1C3t

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

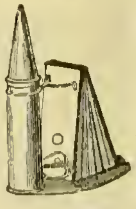
The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.



Bee-keepers' Supplies,

Standard Langstroth,

Quinby Standing-Frame,

And all other kinds of **Hives,**
MADE TO ORDER,

Quinby Smoker a specialty.

I shall supply anything you need in the Apiary. Send for Illustrated Price List.

W. E. CLARK, successor to L. C. Root,
7A1y ORISKANY, Oneida County, N. Y.

SALARY of $90 a month and Expenses paid agents everywhere to travel and sell staple goods to dealers, or $40 a month & expenses to distribute circulars in your vicinity. All expenses advanced. salary promptly paid. Sample package of our goods and full particulars **FREE.** Send 8 cents for postage, packing, etc. We mean what we say.

NATIONAL SUPPLY COMPANY,
Palace Building, Cincinnati, Ohio.

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ½ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Feb. 24, 1886. No. 8.

A Clergyman, who is also a bee-keeper, sends us a rhyme, which reads like this :

Please give no rest
To Rev. R. West,
'Till he with zest
Grants your request.

To which we add :

Let him do his best—
Counteract the jest—
Or he'll be *non est*,
When comes the *law* test.

Since the above was put in type, and just as this paper is ready for the press, we have received a letter from the Rev. Robert West, in which he intimates that the next issue of the *Advance* will contain something that will set the matter right. He adds : "I sincerely regret if I have misrepresented any honest industry." We shall look with interest for his next week's paper, and hope that those newspapers which have copied the slanders on the industry of bee-keeping, will also copy the retraction—if such is made in the *Advance.* We have no ill-will towards Mr. West, and only ask *simple justice for our pursuit.*

◆

Frame Plyers, for taking frames out of hives, or moving them. This is the latest tool received at our Museum. They are gotten up by John M. Jones, Palmyra, N. Y. The tool is made of galvanized iron, and can be utilized in many ways. It has a long claw for loosening frames, a hook, which may be used for carrying other frames besides the one held by the plyers, and it is supplied at a very moderate cost—by mail, for 40 cents.

◆

Frank Leslie's Popular Monthly for February is all that its patrons can desire. The articles vary in character and treatment, are all interesting and timely, and all well illustrated. Mr. Croffut's article on the late William H. Vanderbilt gives a striking picture of the career and life of the greatest American millionaire, and the reader can judge for himself of the man, his palace, his gallery, his stables and his tomb.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

The Rural Canadian for February is brimful of good things. In the department of "Bees and Honey," we find among other things of interest, the following item concerning Father Langstroth at the Detroit Convention :

> What a benignant face it was that smiled upon us from the platform, showing how "the grand old man" enjoyed himself, to see the boys enjoying themselves ! The poet Ossian says : "Old age is dark and unlovely." No ; not always. We have seen an example of it bright, cheery and beautiful, and it will often re-appear in memory when the vision itself has disappeared from earth. May the day be yet far distant on which that catastrophe shall happen ! "Touch him gently, Father Time."

Concerning Heddon's new book and management, it remarks thus :

> Hardly has the new year dawned when out comes Mr. Heddon, like a Jack-in-the-box, with a new hive and a new book. Not since the discovery of the movable-frame has there been such a turn in the wheel of progress. We have been fiddling and fumbling with single frames, and have meddled and meddled with our bees until "confusion worse confounded" has been the condition of affairs in many an apiary. Now, lo and behold, the simple principle of handling hives instead of frames has been enunciated, and it will revolutionize chaos ! There is hardly a needful manipulation in the apiary but can be done in a twinkling on the new Heddon system. It is original and unique. Instead of one cumbrous hive, we have two halves, each complete in itself. Instead of one clumsy frame, we have two little shallow ones, with closed ends, made fast by thumb-screws, which can be loosened as quickly as you can say "Jack Robinson," when necessary, which it seldom will be. Do I want to reverse frames ? I have only to tip over a half-hive. Do I want to make an artificial swarm ? I remove a full half-hive and replace it with an empty one. Do I want to get rid of queen-cells, and prevent swarming ? I upset the half-hive. Queens cannot be reared standing on their heads ! If I wish to make assurance doubly sure, I can cut out queen-cells with my pocket-knife, inside of a few seconds. Do I want to contract the brood-chamber ? I shake the bees out of a half-hive. Is it desired to force the bees into section-boxes ? Remove half-hive, shake the bees out of it in front of the other half, and put on a case of empty sections. Do I want to enlarge the brood-nest ? I take the top half-hive, in which is the surplus honey, and make the bottom half-hive the top one, put on a section-case, if I go in for comb honey, or comb foundation, if I wish to extract, and up goes the surplus honey, doubling the brood-nest. Do I want to form nuclei, rear queens, or make a home for an overplus of bees ? The half-hive is just the thing. Am I preparing for winter ? I take a half-hive, supplied with stores, run in the bees, remove the bottom-board, set the little squat receptacle over my hopper-stand, pack chaff around and over it, and leave them to hibernate, have a flight, rear brood, eat pollen, or anything else at "their own sweet will," until the advent of spring. Or I carry the half-hive into the cellar, regulate the temperature, and "leave it be."

◆

Geo. W. Meade & Co., of San Francisco, Calif., have issued their annual Review of the Crop of Honey, from which we extract the following :

> The honey product of 1885 was : Extracted, 1,500,000 pounds ; comb, 750,000 pounds ; beeswax, 60,000 pounds ; raisins, 470,000 20-lb boxes.
>
> We could scarcely expect the crop of extracted honey of 1885, from various adverse circumstances, to equal the out-put of 1884, which was a phenomenal honey year, but we make a very respectable showing nevertheless.
>
> Like extracted, and for the same reasons, the product of comb honey of 1885 is considerably less than that of 1884, but unlike the extracted there has ruled such a brisk demand on Eastern account for our comb honey that we may safely say the bulk of the crop has already been marketed, and at prices all the way from 25 to 100 per cent. over the figures obtained in 1884. While the output, therefore, in pounds, fell short from the year previous, in actual dollars and cents, a large portion of this shortage has been covered.
>
> To still further increase and extend the sale of California comb honey, we again repeat our former suggestions, that a one-pound section be adopted instead of the two-pound now so generally used, and that at least one-half of the cases be made to hold but 30 pounds instead of making them all 60 pounds, or thereabouts, as is now the custom.
>
> California honey, both comb and extracted, is now recognized everywhere as the finest produced in the world ; and while bad seasons and low prices will be met from time to time, on the whole the bee-industry of this State, one year with another, promises as fair returns for the labor and capital invested, as any other growing industry of the Golden State.

◆

Hunt's Adulterations received much attention in the BEE JOURNAL for 1884, on pages 475, 724, 787 and 812. Mr. T. L. Von Dorn, President of the Nebraska Bee-Keepers' Society, had the so-called honey tested, and the result was published. Mr. Hunt denied the adulteration, and the Marshall county, Iowa, Society proposed to have it re-tested, and we agreed to publish the result of that test, but so far no such matter has been offered us for publication—though it is over a year since. Now Mr. Von Dorn has sent us a "statement" of the proprietor of the Townley House, at Lincoln, Nebr., and its clerk, Mr. Adams, who says that Mr. Hunt inquired of him where he could purchase glucose which he desired to mix with honey he had for sale ; that he did procure it and sold the Townley House 5 gallons of the mixture, claiming that it was just as good as the pure article, and that but few could discover the difference. Doubtless Mr. Von Dorn has acted for the interests of bee-keepers in the matter, but it must be said, however, that the Townley House proprietor bought the mixture (not as pure honey, but an adulteration), knowing its true character. This statement we make in *justice* to all concerned, and now the subject is dismissed from our columns.

◆

New Price-Lists have been received from the following persons :

J. M. Jenkins, Wetumpka, Ala.—20 pages—Implements in Bee-Culture.

A. B. Howe, Council Bluffs, Iowa.—20 pages—Bee-Keepers' Supplies.

D. A. Fuller, Cherry Valley, Ills.—4 pages—Bee-Keepers' Supplies.

Oscar F. Bledsoe, Grenada, Miss.—6 pages—Queen Breeder.

E. T. Lewis & Co., Toledo, O.—2 pages—Honey Extractor.

F. A. Snell, Milledgeville, Ills.—16 pages—Apiarian Supplies.

Elvin Armstrong, Jerseyville, Ills.—24 pages—Crown Hive, Bees, and Apiarian Implements.

J. E. Pryor, Dexter, Iowa.—8 pages—Bee-Keepers' Supplies.

J. W. K. Shaw & Co., Loreauville, La.—4 pages—Early Southern Queens.

Hutchinson & Taylor (W. Z. Hutchinson, Rogersville, Mich., and R. L. Taylor, Lapeer, Mich.)—4 pages—Bees, Queens, Comb Foundation, etc.

Frank A. Eaton, Bluffton, O.—2 pages—Italian Bees and Queens.

Joseph E. Shaver, North River, Pa.—1 page—Bee-Keepers' Supplies.

A. J. Norris, Cedar Falls, Iowa.—5 pages—Italian and Carniolan Bees.

Any-one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Reversible Frames.

Query, No. 204.—Do you consider the reversible frame a good thing? If so, what is the best and cheapest way to make them? Would it pay to change the frames of 60 colonies?—J. C., Ind.

Go slow in adopting radical changes in bee-keeping, is my advice, *especially to beginners*. Let the old, experienced bee-keepers thoroughly test these novelties first.—H. R. BOARDMAN.

It may be in the hands of the experienced comb-honey producer. Change the frames of a very few colonies, and try them, and if you approve of the change, then do it; but go slow until you can prove by practical experience whether you want to use reversible frames.—H. D. CUTTING.

No. Reversing will do for people who want all the honey in the supers, and wish to feed their bees after the crop. We want our bees to have enough honey left in the brood-chamber to live on, and breed without feeding. Reversing has been practiced in Europe for scores of years, and is generally abandoned.—DADANT & SON.

Yes, but I consider a reversible hive of *far* greater value. As to which style of frame is the best, if a reversible hive is not used, I am not posted. I shall change more than 60 hives next season, and would not do so unless I thought it would "pay."—W. Z. HUTCHINSON.

No, I do not. I do not deny that an advantage is gained in reversing by bringing the brood up close to the sections (if it is not already up close, as it generally is in the shallow frame at the proper time); but the advantage is not so great as to warrant the time and trouble required to do it. There are many annoyances as from uneven combs, propolis, etc., that make the whole operation disagreeable, besides disturbing the colony in their work. I further consider that there are solid reasons against inverting hives. I connot conceive of a circumstance in which I should want to either reverse brood-combs or invert hives. The necessity for it certainly cannot exist with a shallow-frame hive.—G. L. TINKER.

For myself I should not make the change inquired about. I can succeed in gaining all that is claimed by the advocates of reversible frames in an easier way. Invertible hives and reversing frames will both have their day and then play out, in my opinion.—J. E. POND, JR.

I am not prepared so say that I do. I have frames, and sectional parts of hives in my apiary that can be readily inverted, but I can see no rational reason why it should be done, except for the one short job of having the combs securely fastened in the frames. In fact. I have seen but two arguments in favor of inverting frames, or hives, that are worthy of serious thought, and the exception I have named above is one of them. My answers to your concluding questions will be found on another page.—G. W. DEMAREE.

1. So far I have had no use for reversible frames. 2. Try 1 or 2 of the 60 with reversible frames, and then if you like them and think it will pay, you can change the other 58. Remember that practical experience is the best teacher in all of these things.—G. M. DOOLITTLE.

I have not decided to use any such frames yet, because I think that I can have the principal advantages without reversing. I should, however, be not greatly surprised if, five years from now, all my frames were reversible; and still less surprised if others gave up their use. Reversible hives have some advantages that reversible frames do not possess, and if I ever go into the reversing business it will likely be in that direction.—C. C. MILLER.

Of all the suspended reversible frames that I know anything about, I prefer the one described on page 9 of the AMERICAN BEE JOURNAL for 1885. If I did not prefer that one I should use the one I did prefer. After using thousands of them for two seasons, I never expect to use frames that will not reverse.—JAMES HEDDON.

1. I do decidedly. 2. I think so, but you had better try a few first and see if you think so. I tried them for one year, then changed part, and at the end of the second year I resolved to change all. Now comes the reversible hive, which will make me wait till I try it.—A. J. COOK.

Carniolans vs. Italians.

Query, No. 205.—Is the Carniolan race of bees any better than the Italian bees?—F.W.

Those which I had were not as good.—G. M. DOOLITTLE.

My experience with them has been too limited to enable me to say that they are better.—W. Z. HUTCHINSON.

The reputation of the Carniolans for swarming is a serious objection.—C. C. MILLER.

That is a question on which authorities differ. Time will tell.—A. J. COOK.

I never have tried them. They belong to the dark or black race of bees, and all black bees are inferior to the yellow bees.—G. W. DEMAREE.

We do not think so. We tried them in 1876, and discarded them. They are black bees, rather large, and quite prolific.—DADANT & SON.

If they are a better race of bees than the Italians, they have not yet proved themselves so to be. They are essentially hybrid bees that the inbreeding of a thousand or more years of natural selection has failed to produce uniform markings.—G. L. TINKER.

I do not know just how the races that you mention compare, because they are different in so many characteristics. But when the Carniolans are compared with the best Italians or German bees, I believe that the Germans will prove to be the best.—JAMES HEDDON.

They are said to be far more gentle, and equally as good honey-gatherers; the queens fully as prolific, and the workers very hardy indeed. The only drawback (if it is such) is said to be that they have a strong inclination to throw out swarms during the honey season. This last, I think, is owing to their nature not being well understood.—J. E. POND, JR.

Dark Capping of Honey.

Query, No. 206.—Why is my honey capped over so as to appear so dark? It seems to be of good color and nice flavor, but it is capped over so very darkly as to be unsalable. I practice both side and top storing.—H. J., Mass.

I should like to know more of the particulars before deciding. There may be something in the strain or variety of bees.—W. Z. HUTCHINSON.

Because the cells are full and the honey touches the cappings. Wherever the honey does not touch the cappings, it looks lighter.—DADANT & SON.

If the combs look watery it is because the honey is filled too close to the cappings, and if not caused by dampness, but comes so from the hive, you had better change your strain of bees. If the cappings themselves are dark, like old comb, it may be the surplus is too near the brood-combs, and the bees carry some of the dark wax from the latter to the surplus.—C. C. MILLER.

Probably it is fall honey. Perhaps it remained in the hive too long and was soiled by the bees. It hardly if ever pays to sell honey in the comb that is capped in the fall. It is better to extract it and use the combs for light honey the next season.—A. J. COOK.

It is impossible without a sample of the honey to do more than guess. It may be darkened by being travel-strained, or the honey may be swelled against the cappings; or, if old dark combs were in the surplus department it might be mixed with the cappings.—H. R. BOARDMAN.

Perhaps the bees used wax taken from dark brood-combs to seal the surplus honey with. I have seen newly built brood-combs that were near to old black combs show dark capping as though the bees had drawn on the old combs for wax to cap them with. If you had taken the trouble to uncap a section and extract the honey, you could have seen whether or not only the capping was of dark color.—G. W. DEMAREE.

When I used side-storing hives I had the same trouble. I have never been able to get white capped honey at the side of a hive, or at any point in the hive where the field workers collect for the night after their day's work is done.—G. L. TINKER.

Probably because the honey was left on the hive for some time after the capping is done. Fall honey, as a rule, is capped darker than earlier yields. The warmer the weather and the sooner the honey is removed after being capped, the lighter the cappings will be found.—J. E. POND, JR.

There might be several reasons, the most common one being that the cells were filled too full. This is not likely the trouble in your case, if your bees are Germans, or have a dash of German blood in them.—JAMES HEDDON.

Certain strains of bees do this, and I found last summer that even the brown bees did such work when getting honey from Alsike clover. I never saw such work when honey was coming in from basswood or teasel, no matter what kind of bees were kept.—G. M. DOOLITTLE.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ⊶ east; ⊷ west; and this ♂ northeast; ⟜ northwest; ⊸ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

The Origin of Honey, etc.

DR. J. P. H. BROWN.

Query, No. 189, involves so much of the occult in vegetable chemistry and physiology, that answers can only be based on analogical reasoning. It cannot for a moment be presumed that the honey is in the ground ready to be pumped up into the flower. Prof. Johnson, in his work on "How Crops Grow," says:

"The sap in all cases consists chiefly of water. This liquid, as it is absorbed, brings in from the soil a small proportion of certain saline matters—the phosphates, sulphates, nitrates, etc., of the alkalies and alkali-earths. It finds in the plant itself its organic ingredients. These may be derived from matters stored in reserve during a previous year, as in the spring, sap of trees; or may be newly formed, as in summer growth.

"The sugar of maple-sap, in spring, is undoubtedly produced by the transformation of starch which is found abundantly in the wood in winter. According to Hartig (*Jour. fur Prakt. ch.*, 5, *p.* 217, 1835), all deciduous trees contain starch in their wood and yield a sweet spring sap, while evergreens contain little or no starch."

This is, no doubt, the reason why the flowers of evergreens yield comparatively little honey. The *Evonymus*, a beautiful evergreen that hedges the walks of many a southern yard, often blooms profusely, but its flowers are rarely visited by honey-bees. Its nectaries secrete a resinous matter that emits a disagreeable odor, and are visited by flies and other insects, but by no bees. The deficiency of starch in this plant would preclude the formation of honey.

That the constituent elements, as well as the proximate elements of a plant, vary in proportion by the character of the soil and the moisture and condition of the atmosphere, is a fact fully demonstrated. Fruits are sweeter and better flavored in seasons when there is not too much rain, but just enough to sustain the fruit to full size and maturity. Melons grown on low, moist lands, or in wet seasons, contain less sugar than when grown on uplands with not too much rain. The same applies to the sweet-potato. Sugar-cane always yields more sugar and makes better syrup when the season is not too wet.

"The soil, or the supplies of food, manures included," observes Prof. Johnson, "have the greatest influence in varying the proportions of the ash-ingredients of a plant." Sweet-potatoes grown on sandy uplands contain more sugar and starch than those grown on flat, moist lands. My experience has been the same with the Irish potato—those on uplands being more mealy. The flavor of the grape is very much influenced by the fertilizers used. Melons fertilized by Peruvian guano are not as sweet nor as fine in flavor as those grown with stable manure.

Therefore, if the production of sugar in fruits and plants is so greatly influenced by wet, moisture, atmospheric conditions, and soil, we can safely infer that the organs of the flower that secrete the honey are affected by the same causes. True, the *rationale* is not well understood; but scientific investigation is destined to make plain many operations in nature that now seem to us inexplicable.

Augusta, ⊶ Ga.

For the American Bee Journal.

Convention at Meadville, Pa.

The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association met at Meadville, Pa., at 11 a.m., on Jan. 20, President Mason in the chair.

The reports of the Secretary and Treasurer were read and approved; the annual dues were by vote reduced to 25 cents for the present year; and the name changed to "Northeastern Ohio, Northern Pennsylvania, and Western New York Bee-Keepers' Association," and the Constitution amended accordingly.

In the afternoon President Mason delivered the annual address, which was replete with good ideas; D. H. Lefever delivered an address of welcome, which was replied to by D. Videto, in a happy manner.

The election of officers resulted as follows: President, C. H. Coon, New Lyme, O.; Secretary, J. H. Woodworth, West Williamsfield, O.; Treasurer, Geo. Spitler, Mosiertown, Pa.; 1st Vice-President, C. H. Wright, Conneautville. The President was instructed to appoint two vice-presidents from each county represented.

Andover, O., was chosen as the next place of meeting.

The first topic discussed was "Spring Management of bees, previous to the honey-flow." U. E. Dodge said that it was an important subject, for upon the way we manage at this time depends the whole question, as to profit. It is hard to tell what to do, and how to manage, as each colony differs from others, hence the impossibility of laying down any set rules. He winters his bees in a cellar, and is a firm believer in a warm temperature; he keeps the room in which his bees are wintered at a temperature of from 55° to 60°; and tries to keep his bees in the cellar until soft maples blossom. If it gets too warm he uses ice to keep down the temperature; he does not like to set his bees out until warm weather; he uses absorbents on the top of the bees (chaff and sawdust, mostly the latter). When he puts his bees out, if all right, he lets them alone; if weak, he feeds them and takes brood from such colonies as can spare it, to build up the weak ones.

By request, Mr. Dodge gave a description of his cellar, which was, in brief, as follows: A common cellar under the house in which he lives; has a room partitioned off in one corner, directly under the sitting room; has sub-earth ventilation, but has the pipe but 3 feet under ground, because the cellar was already built; if he had to do it again, would put the pipe near the bottom. He has a pipe connected with the pipe in the ground, which he has run some distance in the air, and in which he has a valve with which to regulate the temperature of the cellar; he also has a ventilating pipe extending from the room in the cellar to the stove-pipe. He has a large stove in his sitting-room, directly over the bees, in which there is a good fire continually; has never had the temperature fall below 42° in the coldest weather. He winters 85 colonies in this room; too many, he thinks; almost all his colonies have brood before he sets them out in the spring. He winters some out-doors, because he does not like to risk all in one place. His losses in the cellar have never exceeded 11 or 12 per cent., often none; while out-doors they were at times 20 to 25 per cent. He does not get as much honey as he would if he hired some help in the busy seasons, but it being almost impossible to get the right kind of help, he prefers to do with less honey.

D. Videto said that no person should expect 100 pounds of comb honey unless all queens are prolific. Drone combs must be removed; you want but few drones. Very few of his colonies came through the winter strong. He had 120 colonies in the fall of 1884, and only one came through strong, had 24 weak ones, the remainder were dead. Some filled but two spaces, and some had no queens. They did not commence swarming until July 12. He bought 8 colonies. He had many combs of sour honey from those colonies that died which he fed gradually to the bees. Would never sell it, as people who bought such stuff once, would never want to eat honey again. His yield was between 2,900 and 3,000 pounds of comb honey, besides abundance of frames saved for winter and spring feeding, and 200 pounds of extracted honey. If bees are weak, he contracts the brood-nest to from 3 to 5 combs.

"Production of comb honey" was the next topic discussed.

D. Videto—How to manage to get the greatest amount of comb honey is an important question. *Successful bee-keeping is the securing of the greatest amount of honey out of each hive. To secure this swarming must be prevented. As it is almost impossible to prevent swarming, he lets them swarm, places the hive with the swarm where the old colony stood, placing the old hive just back of the new one. Lets them remain for 24 hours, then takes a frame of uncapped brood from the old hive and puts into the hive with the swarm; so each day until all the brood is in the new hive, the old colony being thus destroyed, swarming fever is destroyed. In 21 days all the brood is hatched, and a large force of workers are ready to gather honey. This is the way to do if you do not want increase. If increase is wanted, different method must be pursued.

U. E. Dodge lets them swarm naturally, and with the old colony and the increase, can get more honey than with one colony after Mr. Videto's plan.

Evening Session.—Topic: "Is it advisable to attempt to prevent swarming, when running for comb honey?"

M. E. Mason—It is not advisable.

Mr. Shepard—To prevent swarming bees want plenty of room. Some seasons he got large increase of colonies and little honey, while other seasons he got much honey and little or no increase.

Some discussion was then had on Italianizing, foul brood, cellar wintering, tiering-up, cleaning combs, breeding queens, etc.

SECOND DAY.

President Coon in the chair.

Mr. Videto said many claimed the cause of the depressed state of the honey market was owing to over-production, which he was sure was not the case. He lays it at the door of the general business depression, etc. In order to sell we must put our goods in better shape, and not sell too soon.

Mr. McLean—Some seem eager to sell, and take off honey when but about two-thirds capped. He always sells by sample, and sells honey on its merits.

Mr. McGonnell could always sell his honey; he tries to have it in good condition.

Pres. Coon said that 2 years ago he had some honey very early, which he thought he could sell for a good price, but to his surprise others were ahead of him, but with an inferior article, not ripened and capped, which they were selling at 12½ cents per pound. He got disgusted and took his honey back home and realized 16 cents per pound for it. He cannot see why people act so with honey; they do not with other farm products.

Mr. Mason—The same laws govern the sale of honey as other products. If only a first-class article was offered for sale, a good price could be realized. He detailed his experience in building up a trade for honey, in Pittsburgh, where he shipped over six tons last season. When he went there he found the markets glutted, not with good honey, but with stuff which had once been good honey, but had been ruined in a cool, damp cellar. A person who buys a good article will buy again. Always sell honey for what it is. Never mix first and second-class honey in the same case, if you wish to keep up your reputation.

The question box was opened and a variety of questions answered.

Afternoon Session.—On motion, Art. III of the Constitution was amended so as to require only two vice-presidents from each county instead of four.

Wintering bees was the first topic discussed, and one of the most important, from the fact that nothing in apiculture is so uncertain as is the wintering of bees.

Mr. Sterrett does not see much difference between chaff and sawdust for winter packing. Has had equally good results with either.

Mr. See prefers buckwheat chaff.

Mr. Lefever had wintered bees without packing, but lost largely.

Mr. Herman uses chaff hives with 3 inches space. Uses buckwheat chaff for packing, and has lost but one colony in three years.

Mr. Videto thinks it is not all in packing, but in other conditions. Locality has much to do with it, as well as stores. Has packed, and in twelve years has three times lost all his bees. Has some in the cellar now. All should try both methods, and adopt that which is best suited to the locality.

Mr. McLean related an instance where bees were covered thickly with snow. Some were uncovered and some left in the snow; those that were uncovered died, the others came through all right.

J. H. Wright—In putting in comb for winter, put in alternately one heavy and one light, and out of 60 last winter lost one. Thinks his honey was better than some others, as he had no honey-dew.

After discussing several other topics the convention adjourned.

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m. M. E. DARBY, *Sec.*

For the American Bee Journal.

The Reversible-Hive System.

DWIGHT FURNESS.

On page 71, Mr. G. M. Alves (after penning some well-worded sentences which show his high literary ability, and, if meant literally, his non-progressive tendencies), asks four questions in regard to the new Heddon hive. After a careful study of that hive, and some experience with the method of management to which it is especially adapted, I am fully convinced of its superiority, and I am now making 100 of the new hives for next season's use. I would answer those questions from my experience briefly, as follows:

1. No. The hive is quite simple. This question was probably inspired by the thumb-screws. These screws are *just the thing* for clamping together wide frames in any style of super. The fixedness of the different parts makes it, with its peculiar system of management, at once the simplest, speediest and best.

2. The new hive requires well seasoned lumber, carefully and accurately cut. It is all plain, straight work, however, and can be done on any first-class circular-saw table. Like all of Mr. Heddon's inventions, it possesses practicality in an eminent degree.

3. Yes, when by so doing they can diminish labor one-half; or, in other words, care for two colonies with the same labor now required by one. I believe that the new hive will enable us to do this. The cheaper the honey the more need for better fixtures. When made in large quantities, the new hives will cost not to exceed one-third more than the ordinary Langstroth hives. In retailing hives there is much expense besides the cost of making.

4. I think it is true, that Mr. Heddon's new method of horizontal interchanging of brood-combs will secure to us most of the advantages that we know by experience are realized by reversing. This is one of the brightest thoughts of the day, but as stated in his book, especially advantageous when used in connection with reversing. I do not know why Mr. Alves, or any one else should wish to transfer this principle to the Langstroth hive, when it is so much better carried out in the new hive as constructed by Mr. Heddon. Without connecting it with inversion, perfectly filled frames of combs are wanting, and we have nothing to take the place of interchanging, when contracting to one case—a system that I have thoroughly tested and prize highly. By this combination of the two systems we may be able to practically control swarming, for the first time in the history of bee-keeping.

The inventor claims that in the construction of the new hive he combines nearly all the advantages of both closed-end and suspended frames, and embraces but few of their peculiar disadvantages. To echo the words of Dr. C. C. Miller, it seems to me these are such self-evident truths that it needs no experiment to know them.

I will not mention the many other improvements in manipulation, for which the new hive is especially adapted, and which cannot be carried out with suspended frames, or any others unless arranged substantially as Mr. H. has them.

In the grand march of progress, Mr. Heddon has taken a long stride in advance of us all, and, like all others who get "ahead of the crowd," he will be the target for a volley of criticism, sarcasm and ridicule from the elbowing mass in the rear.

Furnessville, Ind.

Maine State Convention.

The Maine State Bee-Keepers' Association met in convention at Skowhegan, Me., at 1 p.m., on Jan. 19, 1886, President J. B. Mason in the chair, who gave his annual address.

An essay was read by Isaac Hutchins, upon the "Coming Bee." Mr. Hutchins advocated a cross between the German and Italian races, for the "coming bee."

F. O. Additon read an essay entitled, "Of what practical benefit are the improvements in bee-keeping, and to what extent may bee-keeping be carried ?"

An essay was read by L. F. Abbott, of the Lewiston *Journal*, entitled "Pure Honey."

Are drones of any use, other than for fertilizing queens ?

Various opinions were expressed—some thinking that they may help in evaporating and sealing the honey; also in keeping up the warmth of the hive. Others thought that they were of no use other than for fertilizing queens.

Is stimulative feeding in the spring desirable ?

All favored it. It was decided that feeding should begin as soon as pollen comes in freely, and to feed inside the hive.

Are the yellow bees an improvement over the blacks ?

It was decided that they were.

How can we best develop a home market for our honey ?

Many related their experience in developing a home market; the essential points being to carefully grade the honey, and for the bee-keeper to place his name upon every package sold; to educate the people to eating honey, and if necessary to introduce it; that is to say, take it from house to house.

In what way can swarming be best controlled ?

Each bee-keeper seemed to have a method of his own to control swarming; but it was the general opinion that all after-swarming should be checked.

To what extent should comb foundation be used ?

It was decided best to use full sheets in the brood-chamber, and that all frames should be wired.

It was resolved that bee-keepers should sow Alsike clover for its honey and forage, and recommend it to farmers for hay.

Mr. Cornforth said he could produce extracted honey for 15 cents per pound, easier than he could produce comb honey for 25 cents; and that he could sell ten pounds of extracted honey when he could sell one of comb honey, at their relative prices.

The following officers were elected for the ensuing year: President, James B. Mason; Secretary, Isaac Hutchins; Treasurer, W. H. Norton.

Jonathan Pike, John Reynolds, and F. F. Graves were to make arrangements with the State Agricultural Society for an exhibit of bees, honey, and apiarian implements at the next State Fair.

J. B. Mason, Isaac Hutchins and L. F. Abbott were to arrange for the next meeting at Mechanic Falls, in January, 1887.

F. O. Additon, W. H. Norton and F. F. Graves were to use and decide upon the merits of the different reversible frame attachments.

WM. HOYT, *Sec.*

For the American Bee Journal.

Prospects for the Coming Season, etc.

E. J. BAXTER.

We had very cold weather again week before last and last week—from 24° to 27° below zero. The first 3 days of this week were very warm, comparatively—65° in the shade at noon. My bees had a splendid flight, and I find that *not one* of my 230 colonies has perished—possibly because they all had pollen in great abundance last fall when they were put into winter quarters. White clover is abundant, and looks vigorous; it has been growing some under the snow. If nothing happens to kill it out between now and the opening of spring, the *possibility* is that we will have a crop of white clover honey.

I am making preparations to greatly increase my apiaries the coming summer. I work nearly all of my apiaries for extracted honey, as I find that it pays me best. I will run only one apiary, this year, for comb honey. The great bulk of the increase of my apiaries is made by division. Last year I had only 12 natural swarms, and I made 90 by division, all being good and strong. I invariably use full sheets of foundation in the brood-frames, and if we have an average honey season this year, I expect to use at least 200 pounds of heavy foundation. I now use full sheets of foundation in all of my sections, and surplus frames, also, and I find, after repeated experiments, that it pays well.

I have tried hives with *deep* frames, and hives with *shallow* ones; *large* hives and *small* hives—8-frame Langstroth, and my experiments and observations have taught me that *large* hives with *deep* frames are the best and the most profitable every time. I could mention several facts to prove this, but I will give only the following one:

Last year we had a very poor honey season in this part of Illinois, as every one fully knows. Last spring I determined to work 30 colonies of my home apiary for extracted honey, and all the others for increase. I began to work early with the bees, so as to get them as strong as possible for white clover bloom. By the middle of May the most of the 30 colonies worked for extracted honey had their 10 frames (18 inches long and 10½ deep) almost covered with worker brood; and by the middle of July I had extracted 2,475 pounds of as fine white clover honey as was ever gathered—or an average of 82½ pounds per colony; while my neighboring bee-keepers, with 8-frame Langstroth hives, had scarcely anything — not enough, in fact, to make it worth the trouble to take it from the hives.

Nauvoo, Ills., Feb. 12, 1886.

The Wisconsin State Convention.

The Wisconsin State Bee-Keepers' Association met in Madison, Wis., on Feb. 4, 1886. President C. A. Hatch delivered his annual address, which brought out a discussion on "Wintering Bees."

Why is clover honey better for wintering bees than fall honey ?

Mr. Elver—In the fall bees sometimes gather impure sweets from grape-vines, cider-mills, etc., while in clover time they find plenty of pure honey, and that only.

Frank McNay—I have found by experience that fall honey is as good as any in my locality.

F. Wilcox—Impure honey is not good at any time or in any condition. Fall honey is as good if not better, because it is thicker than clover honey, unless taken out and stored in a damp cellar, when it would absorb moisture and spoil.

Is clover better than basswood honey? Bees leave clover for basswood.

F. McNay—They go to the basswood because they get honey faster.

Mr. Elver—Basswood is as good as clover. I think it a mistake to feed sugar; pure honey is good enough.

Mr. France—I winter my bees on basswood honey. I fed 600 pounds of it on Aug. 1. I have 510 colonies, and extract once a week when the yield is good.

Mr. McNay read an essay on "Managing bees for producing comb honey."

F. Wilcox practices the tiering-up plan. He does not remove the sections as soon as finished, as he thinks that it ripens better and is not much soiled if full cases are kept on top.

Mr. Wilcox reported that the State Board of Agriculture had agreed to leave it with this Association to revise the premium list of the apiarian department, and add 25 per cent. to the amount allowed last year. The President and Secretary were authorized to revise the list.

Mr. France warned the members against shipping honey to G. W. House, of New York, as he was irresponsible.

AFTERNOON SESSION.

The following officers were elected: President, C. A. Hatch; 1st Vice-President, Dr. J. W. Vance; 2d Vice-President, E. France; Secretary, F. Wilcox; and Treasurer, F. Minnick.

Mr. Danher exhibited a bee-feeder which resembled a brood-frame without a top-bar, with a thin board on each side, the cracks and joints being waxed. He recommended candied honey as food, softening it with warm water when necessary.

Mr. Spangenberg exhibited a new implement for uncapping honey. It was like a small paddle three inches wide, with small steel wires one-fourth of an inch apart, driven in the end. The projecting wire was sharp, and curved like a cat's claw, to scratch open the cappings.

The following resolutions were then passed unanimously:

Resolved, That the bee-keepers of this State endeavor as far as possible to create a home market for their honey, so that there will be no need of seeking city markets in which to dispose of our surplus products.

Resolved, That we thank Mr. T. G. Newman, of Chicago, for his efforts in securing reduced rates of transportation on honey, and congratulate him upon his success.

Resolved, That we desire to express to Mr. Newman our sincere appreciation of his labor and zeal in fighting the glucose adulterators, and bringing to light their nefarious schemes against the interests of bee-keepers.

Resolved, That the bee-keepers of the State are urged to make more creditable exhibits at the next State Fair.

Dr. Vance read a well prepared essay on "Foul Brood," reciting the fact that he had since our last convention lost all of his bees by that disease. He related the experiments of Mr. Cheshire, of England, in treating the disease with phenol, and spoke very hopeful of the result of his researches.

Has there ever been any assessment of bees in the United States?

F. Wilcox—I am taxed on them.

Mr. Waller—In Richland county they are never taxed.

Mr. Elver—They pay a premium for keeping them in some parts of Europe.

Mr. Sanford—I think that bees ought not to be taxed.

F. McNay thought that bees ought to be taxed.

STATISTICS.—Twelve of the members present reported 781 colonies in the spring; 1,230 in the fall; 10,075 pounds of comb honey; 46,050 pounds of extracted honey.

From the census report for Wisconsin, taken June, 1885, we get the following: Number of colonies in the State, 51,917; pounds of wax produced the year preceding, 44,281; value of bees, $247,481; pounds of honey, 1,432,766; value of the same, $160,076.

Mr. Hatch—I can say of my own knowledge that the statistics of bees and honey was not complete.

The convention then adjouned.

F. WILCOX, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

For the American Bee Journal.

Do Bees Hear?

A. W. OSBURN.

There seems to me to be no doubt that bees hear; not only do I think they hear, but I have been placed in circumstances when I was fully convinced that they could hear, and hear quickly, too. While keeping bees in California, several times I have seen bees attack horses, dogs, etc., and from the time that the first bee attacked these animals, it would not be half a minute before there would be 10,000 to take part in the battle. Those that have never seen bees attack an animal in earnest, can form no idea how short a time it is before the object of their wrath is completely covered with the little stingers. Now if bees cannot hear, how do they communicate so quickly? The numbers and numbers of evidences that I see while handling bees constantly leads me to think that they can hear. At that particular time when they have decided to sting something to death, I would say do not attempt to liberate whatever they are wreaking their vengeance upon, for at that time they show no respect of persons. I tried it once, and I shall never try it again. Although I had a veil on, I was so badly stung that I had to go to bed—the only time in my life that they got the best of me to such an extent. Were it my own horse, dog or cow, and it could not get away itself, I would not take the chances for the price of a good many such animals. Talk about boiled down and concentrated wrath—the words do not express what one sees, when a large apiary of bees has fully decided to kill somebody!

Cuba, W. I., Jan. 25, 1886.

For the American Bee Journal.

Lamp Nursery for Queen-Rearing.

W. Z. HUTCHINSON.

As most bee-keepers are probably aware, the lamp nursery is simply a tin hive with double-walls, the space between the walls being filled with water, which is kept at a proper temperature by means of a lamp underneath. The one that I have was made by our village tinner at a cost of $2.00. It is placed *in* the top of a box 4 feet high, the space between the outside of the nursery and the inside of the box being about one inch. Blocks of wood nailed in the corners of the box afford a support for the nursery. Strips of wood are fitted in between the upper edges of the nursery and box. The warm air not only strikes the bottom of the nursery, but has access to its sides. There is a wooden cover to the nursery with strips of cloth tacked to it to prevent the escape of heat at the joints. A thermometer is attached to the cover upon the inside, and a hole covered with glass is made in the cover, thus allowing a view of the instrument. I have a large tin lamp that will hold one gallon of oil.

The nursery is kept in a closed room on the north side of the shop, and there is no trouble in keeping the temperature so that it will not vary more than 5°. Incubators for hatching chickens have an arrangement for controlling the temperature, keeping it at exactly the same degree. Such an attachment could be used in connection with a lamp nursery, but I hardly think it necessary, as the temperature in a colony of bees varies more than 5°. I believe Mr. Heddon keeps his queen-nursery in the cellar, and succeeds in keeping the temperature so that it varies only 1°. I try to keep the temperature between 90° and 95°. If it goes above 100° the queens are usually destroyed. I have never known them to be injured by a low temperature; and I have sometimes had it run down to 70°, when the light had gone out because the oil was all used sooner than I expected it would be. In fact, I once accidentally left a cell out-of-doors upon the north side of a hive, for two days, and when I discovered it the queen was just cutting her way out.

The nursery should be of such a size that several of the regular combs can be placed inside. When queens are reared by giving a comb of eggs to a queenless and broodless colony, there is usually a large number of cells upon the comb, and the queens will hatch before the workers, and it is advisable to brush the bees from the comb instead of cutting out the cells, and place the comb, cells and all in the nursery. When the cells are taken from a colony that has swarmed, it is usually better to cut them out, for the reasons that the cells are usually scattered about, only two or three upon a comb, and the eggs in the combs having been laid at different times, bees would be hatching out in large numbers in the nursery. I have been told that virgin queens would not kill one another unless they had first found and eaten food. Even if this were true, which I do not know, it would be difficult to take advantage of it, as, when whole combs are placed in the nursery there is certainly an abundance of food, while, if all cells were cut out they must first be cleaned up by allowing the bees to have access to them after they are cut out; otherwise there would be plenty of food available at the freshly cut edges.

The best way that I have found to avoid losses from young queens killing one another, is to examine the nursery often, as often, at least, as once in two hours, and cage or remove the hatched queens. By listening carefully, any queens that may be gnawing out can be heard. A window in the room can be readily shaded with a curtain; a hole in the curtain admits a ray of light; by holding a queen-cell before the ray of light entering a darkened room, the inmate can be easily seen; especially is this the case if the comb upon which the cell is built is new comb. The last thing in the evening I examine, by the light of a lamp, all of the cells. By holding the cells in different positions between the light and the eye, the queens can usually be seen. Any queen that shows signs of hatching is put in an apartment by itself. To furnish these separate apartments, a "wide frame," the same size as an ordinary brood-frame, is divided by partitions into little "pigeon-holes." One side of this frame of little apartments is covered with a thin board, the other side with glass doors, one door for each apartment. Each door is "hung" with a cloth hinge pasted on, and is fastened shut with a catch made by driving a common pin partly in, then bending it over. To release the door the catch is turned in an opposite direction.

When I first began using the nursery, I took queen-cells from the bees as soon as they were sealed. or soon after; but this disturbing of the cells when the queens were so immature, resulted in so many maimed and crippled queens, that I soon abandoned the plan, and now I leave the cells until they begin to show a brownish color, which indicates that the queens are nearly mature. When the bees are given eggs that are just beginning to hatch, I remove the cells about the ninth day, and the queens hatch in two or three days.

The great object in using a lamp nursery is its convenience. It allows us to examine the cells at *any* time, which would be impracticable if the cells were with a colony of bees. If a young queen hatches out in a colony of bees, unless they have the swarming impulse, the remaining queens are destroyed, and it is quite a task to find the queen. If the cells are allowed to remain with the bees until they "turn color," I think that queens hatched in a lamp nursery are as good as any.

Rogersville, Mich.

Read at the New York State Convention.

Does Bee-Keeping Pay?

WM. F. CLARKE.

At the recent Detroit Convention, an essay by Dr. C. C. Miller in discussion of the above question, was read. It only professed to *open* the discussion, which it did so effectually that a very lively debate sprung up, which was only closed by a resolution to lay the subject on the table, which, on motion, was carried. This action is usually taken by Legislative bodies, when a discussion is unfinished, or there seems no likelihood of arriving at a decision. The question is one of those concerning which much may be said on both sides without arriving at a satisfactory conclusion. After the amplest discussion, one can only look at the *pros* and *cons*, and judge for himself, so that the question really is, "Does bee-keeping pay ME?"

It will simplify the matter very much if we start with a definition of the word "pay." Dr. Miller sets out to discuss the question solely from a pecuniary stand-point, but he decides it, so far as he *does* decide it, on totally different grounds. He states the question at the outset in these terms: "Can I make as much money, in a series of years, at bee-keeping as I can at any other business?" He decides this question for himself in the negative. He says: "I am obliged to confess that I could make more money to give up bees entirely." In reply to the query, why he continues at the business, he replies, in effect, that it pays him otherwise than in dollars and cents. He says: "I like it. It keeps me out-doors, and is good for my health. It allows me to be with my family more than any other calling at which I could make as much, and for the privilege of these enjoyments, I am willing to pay the price of the additional money I would make at a more lucrative calling. Whether the price may not become too large for me to afford to pay, is an open question."

Now it is only in this broad and comprehensive light that we can fairly consider whether anything pays in this world. We are all the time investing more than money in our occupations. We call money the capital which we invest, but it is not all, nor indeed the most valuable investment that we put into our business. We embark *ourselves* as well as our money in whatever calling we undertake, and the most important question in regard to the calling we pursue, is its influence upon ourselves. Does it make us happy or miserable, better or worse, richer or poorer in those qualities that go to form a desirable character? At the conclusion of the auction sale of the fixtures of his saloon, "The Ship," in New York, Paul Boynton said: "Gentlemen, I thank you for helping me to leave a business I have felt to be a curse upon me ever since I entered it. I would rather cultivate bricks than touch the gin-trade again." It paid him in dollars and cents most likely, but it was a dead loss in its influence upon himself. A bright day will dawn on the world when the profits of all businesses are gauged by their intellectual and moral, as well as their pecuniary results.

Undoubtedly there are some occupations that have a natural tendency, apart from the motive under which they are followed, to make people selfish, grasping, narrow, ill-tempered, stolid, coarse, low, and grovelling. There are others that tend to uplift, ennoble, and improve the minds and characters of those engaged in them. Is it not patent to all the world that Wall Street stock jobbery tends to make the men who pursue it wild beasts of prey, and that the haunts of this kind of business are made hideous by the yells and howls of the predatory bipeds that prowl about in them, seeking whom they may devour? That kind of business may and often does pay in dollars and cents, but the more successful it proves in that line, the more serious and impoverishing is the loss of moral character involved in it.

A business *pays* in the broad sense of the term if, in addition to yielding a fair profit in money, it is conducive to health, cheerfulness, mental culture, growth in virtue, and home comfort. Without making invidious comparisons between it and other occupations, it may be safely affirmed that bee-keeping stands these varied tests well. It pays fairly, if properly carried on, as a money investment. Being pursued mostly in the open air during the pleasantest weather, it cannot but be promotive of health, and the cases are not rare in which invalids have been completely cured of former ailments by adopting this avocation. It is pre-eminently a calling that demands study, thought, investigation. It presupposes a high grade of intelligence. There is very little of mere routine about it. Constant observation of natural phenomena is essential to its prosecution. No business oftener brings one face to face with the why and the wherefore of things. An unreasoning bee-keeper must prove a failure, for success depends mainly upon judicious linking of cause and effect. So there is a constant exercise of thought going on, which is eminently favorable to mental improvement. A business, to be enjoyed, must be capable of awakening interest and enthusiasm in those who prosecute it, and there is no more fascinating occupation under heaven than this, to those who have a taste, as most people have. for observing the wise ways and wondrous habits of the animated tribes that people the earth. A bee-hive is a world of wonders in itself, and one never tires of watching the marvellous processes that are constantly going on before his eyes in the development of insect life and activity.

Bee-keeping demands, in a high degree, those moral qualities which are essential to excellence of character, self-command, patience, gentleness, industry, vigilance, attention to minute details, unswerving rectitude, kindness of heart, and evenness of temper. This is a galaxy of noble qualities, and that bee-keeping tends directly to their cultivation is a fact which "nobody can deny." Finally, this is peculiarly a home calling, prosecuted close to one's own threshold, away from the ten thousand temptations that haunt the shop, the factory, the street, the market. To pursue it, one is not obliged to forsake the loved ones at home, and live half or two-thirds of the time among strangers; he can have regular meals, and time to eat them; he can carry out the good old rule, "early to bed and early to rise;" and pursue the even tenor of his way without those breaks and interruptions which are fatal to family order, peace, and good government.

These hints may aid those who are debating the question whether to go into bee-keeping as a business or not. There is still the point of special personal adaptation to be considered.

"Every man can't be a poet,
No more than every sheep a go-at."

A business may be a good and paying one, but I may be entirely unsuited for carrying it on. If so, the part of wisdom is to pass it on to my neighbor. It may pay him, but not me to prosecute it. But for this variety of adaptation, everybody would be crowding into the same line of things, and that division of labor which is necessary to the world's work being well and faithfully done, would not take place. There is no honest business that pays so much better than any and every other as to justify a universal rush into it. The lot of man is wisely equalized in this world, and when in harmony with the eternal fitness of things a person finds a place that suits him, and to which he is suited, he had better consider himself the right man in the right place, and stay there. But if there is a misfit, a square peg in a round hole, or *vice versa*, it is well to seek a change for the better, and there can be little doubt that many would find it in bee-keeping. That this business pays, in the broad and high sense which has been explained, is a fact, which is respectfully submitted to all those who are looking for a suitable vocation.

"The world is all before them where to choose,
And Providence their guide."

Should they make choice of bee-keeping, let us hope they will not get out of their latitude, or find it an uncongenial sphere, but that it may prove, in their case, "the way to be healthy, and wealthy, and wise"—above all, the way to be good, happy, and useful.

Guelph, Ont.

For the American Bee Journal.

Making Reversible Frames.

G. W. DEMAREE.

In Query, No. 204, J. C. asks for the "best and cheapest" way to make a frame that can be inverted. He also asks if it will pay him to change the frames in 60 hives. The answer to the last question is short and will be given first. It certainly will not pay you. Try a half dozen hives first, and find out for yourself that it will make "fuss" on your hands without corresponding returns.

To make a frame that can be inverted at will, make the end-bars ⅜x1⅜ inches, and as long as you want your frames deep. "Inset" them on their edges like the one-piece section, and cut gains in their ends the right size to receive the ends of the long bars. Make the long bars (top and bottom bars) ⅞ of an inch wide, and of a thickness to be in accord with depth or weight of the comb. The two long bars are of the same length. When the frame is nailed together it has no projecting top-bar. Now nail a block scant ⅜ of an inch thick, ⅞ of an inch wide, and exactly 1 inch long, to the outside of each end-bar, exactly in their centre.

If the work is accurately done, the bearings of the blocks will be just ½ inch from the centre of the frame, up and down. Now nail a thin strip of wood on the inside, to the front and rear ends of the hive or case. You will see that when the frames are dropped into place, the end blocks will rest on the strips, and the frames will work one side up as well as the other; and when the case is filled with these frames and "keyed up" tightly, there is no reason why the case might not be turned upside down if one should see any cause to do so.

The above plan of adjusting frames gives the bees perfect control of the interior of the hive, the bee-spaces being perfect all around the frames, a feature that can never be dispensed with where movable frames are used—especially in a warm climate. The central block device for supporting frames, originated with myself so far as I know, or care. At any rate it works splendidly in my shallow-frame cases, or sectional parts of hives.

Christiansburg,♁ Ky.

For the American Bee Journal.

My System of Using Shallow Frames.

T. F. BINGHAM.

In response to the following which was sent to me from the BEE JOURNAL office for reply, I would offer the following remarks. Here is the query:

"EDITOR BEE JOURNAL:—I wish you would persuade T. F. Bingham to detail his management of his shallow frames—how he tiers them up, what he puts between the tiers, what he uses for an outer covering, etc.—TURNER BUSWELL, Solon, Me."

While Mr. Buswell's queries are in order, and like many that have been sent to me from all parts of the country, I must, just now, be excused from a lengthy answer to them.

The fastening which I use is an oblong link or loop made of small, soft iron-wire the length of the width of the hive used. Each end of each of the two movable sides of the hive contains one 10-penny nail, the head of which is left out about ¼-inch; over these nails the wire link passes loosely. When the frames and sides are to be fastened togther, a short piece of soft wood, square at each end, is put between the two sides of the link, and turned so as to hold them apart. The power is simply immense. Frames and sides thus bound together may be handled like a shallow box.

The division-board used between the sets of frames when tiered up any number above another, I call a "strip bottom-board." It is like the bottom-board that I use, except that it is made of strips ¼ of an inch thick, having ¼-inch bee-passages between them. The outside cover is a box open at the bottom, the end pieces of which are wider than the sides and reach below the bottom-board when only one set of frames is used. The sides of the box rest on the top of the sides of the hive on a cleat, while the ends of the box pass loosely down by the ends of the frames and bottom-board, which protects the frames, etc., from storms, etc. The spare honey chamber, of course, is one of the objects of this box or cover, and is 6 in. high and of the size of the hive.

Abronia,♀ Mich.

For the American Bee Journal.

Ventilating Hives in Winter.

R. F. HOLTERMANN.

It appears to me that the proper way to ventilate hives may largely depend upon the place our colonies are in. If the colonies are in cellars or repositories, with the temperature sufficiently high, as Messrs. Barber, Hall, etc., have them, there is no necessity for upward ventilation, as the heat either drives off the moisture, or on account of the high temperature the atmosphere is able to hold more moisture. Should the temperature fall, the moisture would condense.

Whilst now it may be perfect wisdom to permit of no upward ventilation (or practically so) under these circumstances, it might be, and is, in my estimation, a great mistake to give bees wintered outside or in cold repositories, no upward ventilation, for the moisture condenses upon the interior and contents of the hive. I have frequently, even late in the fall, found moisture condensed in great drops upon the under side of enameled cloth of a propolis-covered quilt, and I never permit them to remain upon the hive after cool weather comes on.

But whilst I would under the above circumstances strongly condemn anything that would prevent a passage of moisture, I would as strongly advocate putting upon the top of the hive flannel, chaff, etc., to hinder the passage of the heated air as much as possible. True, if the moisture passes upward and out, the hot air must to a degree, but we have above the bees a substance which is practically known as an absorbent of moisture and a repeller (or confiner) of air. In our Canadian climate, from experience and observation, I would say, for outdoor wintering a clamp appears to me to be the best way to winter bees above ground. Chaff hives are expensive, unwieldy, inconvenient for manipulation, besides possessing many other disadvantages which more than cover the advantages.

Brantford, Ont.

☞ The New Jersey and Eastern Bee-Keepers' Association will hold their ninth semi-annual convention at Cooper Union (Room 22) in New York City, on Wednesday, March 10, 1886, at 9:30 a.m. All who are interested in bee-culture or honey are respectfully invited to attend. We expect a large delegation from the Philadelphia Association to meet with us, and it promises to be one of the most interesting as well as instructive conventions that this Association has ever held. A special invitation is extended to ladies, well knowing that they are by no means a small factor in our industry. Beginners, it is well known, will learn more by attending one good convention than a year of practical experiments will teach them. All are requested to bring something to exhibit, and if you cannot come, send us an essay to read on some live subject. W. B. TREADWELL, *Sec.*

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for $1.30.

Local Convention Directory.

1886. *Time and place of Meeting.*

Mar. 10.—N. Jersey & Eastern, at N. Y. City, N. Y.
W. B. Treadwell, Sec., 16 Thomas St., New York.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bees Quiet in the Cellar.—T. F. Kinsel, Shiloh,♂ O., writes:

My bees are in the cellar. The temperature is never higher than 44° Fahr., and never as low as 32°. They are very quiet yet; with my ear against the hives I can always hear them—day or night. Are they hibernating? Do bees snore in their sleep?

[We give it up. Ask us something easier, next time.—Ed.]

Pleasant Weather Again.—G. M. Doolittle, Borodino,⊙ N. Y., on Feb. 9, 1886, says:

The cold weather has ended, and to-day the bees had a fine flight, with the mercury at 51° in the shade. All of my bees had a flight except one colony that died about Feb. 1, with the diarrhea, contracted about the middle of October. There is something about this disease that none of us understand yet.

Varnish Barrels for Honey.—T. J. C., Cincinnati,○↘ O., asks the following question:

Would barrels that had copal varnish in them, be good to keep honey in, if they were cleaned out and then waxed?

[By no means. The honey would be spoiled.—Ed.]

Bee-Keeping in Texas.—C. Beal, Columbia,○↘ Texas, on Feb. 7, 1886, writes:

I have received a vast amount of useful khowledge in bee-culture from the perusal of the American Bee Journal. Cook's Manual is worth its weight in gold to any man, though he has but a few colonies of bees. Honey is so plentiful here that we let the bees live on their natural stores. The 10-frame Langstroth hive is good enough for me. Myself and Mr. Jesse Parks formed a partnership in the bee-business last spring, he furnishing the bees and the hives in flat, and I doing all the work. The honey was equally divided. I extracted about 275 gallons. I commenced last spring with 70 colonies, increased them to 130, lost 7 by the combs melting down and by the moth. All my old colonies were in box-hives, and my young colonies are in Langstroth and Gallup hives. My apiary is on the banks of the Brazos river. We had 5 overflows during spring and summer, which was a big drawback to bees gathering honey. My bees, for the last 10 days, have been carrying in pollen. They are all blacks, and become very cross sometimes, but with a Bingham smoker I can soon quiet them. Last October I introduced 4 Italian queens successfully, and now the young Italians are working nicely.

Feeding Bees for Winter, etc.—J. H. Andre, Lockwood,♀ N. Y., on Feb. 10, 1886, writes:

On page 59 I spoke of putting 3 colonies into winter quarters which had been fed late in the fall, and cold weather shut the young bees in without their having a flight. It is conceded that such colonies will not stand the winter well on account of pollen eating, but it is nearly 3 months since they have had a flight, and I carried them out for a flight to-day, and so far as I could see they were all right, and spot the snow but very little. One of them was fed for a week or more, probably 8 or 10 pounds of syrup. I do not see how Mr. Dadant could have told any more plain facts in the same amount of space than he did on page 75. It is my opinion that good honey is the most natural food for bees, and I cannot see where the profit comes in by extracting all the honey and then feeding all winter. I noticed on a neighbor's farm a willow tree that did not blossom until after fruit-blossoms were gone. It is the only one I ever saw in this vicinity. The bees were working upon the blossoms in a perfect swarm. It would be a valuable acquisition to our bee-pasturage here, as it blossoms between fruits and white clover. I would like to hear its name through the Bee Journal, and whether it is planted in any place purposely for its honey-producing qualities.

Good Prospect for Clover.—John Nebel & Son, High Hill,○→ Mo., on Feb. 10, 1886, write:

Our bees seem to have stood the winter pretty well so far. They had a good cleansing flight on Feb. 7 and 8, the mercury being as high as 50° above zero, and the 6 inches of snow which has been on the ground since Jan. 8, has all melted. The snow has proven a blessing in protecting the clover this winter, as it is alive and looks as if there would be a good crop this season. We never have much of a clover crop when the earth is bare and the weather extremely cold, as it has been the past month, the mercury being as low as 20° below zero, and for five days 11° and 12° below. We notice that the bees have wintered better during the past cold spell than ever before. As they had no flight for 6 weeks we thought some of them would be in poor condition, but we find that very few dead bees have been carried out, and they have not spotted the snow as much as they usually do when being confined so long. They are wintering on the summer stands packed in chaff. Those in cellars are resting quietly. Although it is not over yet, we feel safe now in getting our bees through the winter.

Strengthening Weak Colonies.—H. R. Boardman, East Townsend,♂ O., on Feb. 18, 1886, writes:

I protest against the plan mentioned by W. Z. Hutchinson, in his reply to Query, No. 201. It certainly will result in disaster to change places with 2 colonies of bees in early spring when honey is not coming in. I have had queens killed and large numbers of bees destroyed by making such changes when I considered it very fair honey weather. My advice to beginners would be, to be a little cautious about changing places with colonies except in the heighth of the honey gathering.

An Original Invention.—Wm. A. Stolley, Grand Island,⊙Nebr., wishes to give this testimony:

I have read Mr. Demaree's article on page 102, and I feel it my duty to testify that I was employed by Mr. Heddon during the year 1884, and I am personally acquainted with the development of his latest invention, for many of his experiments were placed in my charge. I know that the idea of a brood-camber in two parts originated with him, and I remember just when, where and how. I further know that the idea of thumb-screws for clamping frames was original with him, though we found it had been previously used in bee-hives, but not as (nor for the purpose) he uses it. Simple justice compels me to say that I never saw any one more careful and conscientious about copying the work of another. I think he would as soon steal wood, as the results of another's mental labor. His students know, and will testify to the truth of these statements.

Finding Queens.—Warren Pierce, Garrettsville, ♂O., writes:

Although the answers given to Query, No. 195, are sufficient for the expert, and will work especially well with Italian bees, yet for a crowded colony of blacks or cross hybrids, and an inexperienced hand, I think I can suggest a better plan, as follows: A short time before you wish to remove the queen, examine the hive and see that the honey-board, quilt or enameled-cloth which covers the brood-chamber, is not propolized down, but can be removed without delay. Then after they have become quiet, give them a few good puffs of smoke, and in a few seconds remove the quilt carefully and look among the bees on top of the frames. If you do not find her there, she will doubtless be found among the bees adhering to the quilt. With a little practice to learn the right quantity of smoke to use, and the time it will require the queen to run to the top of the hive, any one will be able to find a queen in this way nine times out of ten without removing a frame.

A "Sweet Hum."—John Rey, East Saginaw,⊙ Mich., Feb. 18, 1886, says :

My bees had a fine time last week; they were flying for 4 days, and cleaning house in general, and preparing for another cold spell. I think that the bees that are wintered on the summer stands, in this section, will fare better than they did last winter. They are in good condition so far.

Very Much the Best.—D. Videto, of North East,⊸ Pa., writes thus :

I have always read with great interest all the writings of Mr. G. M. Doolittle, because he gave us instructions which I thought were new and valuable, until I read what he said on page 83, viz.: "I do not know but there *could* be a better Bee Journal gotten up than the one you publish, but so far there never has been." Now I think that Mr. Doolittle was positively conscious that everybody that reads bee-papers at all knows this to be a fact; only he should have stated that it is VERY MUCH the best.

Bees Doing Well.—14—J. V. Caldwell, (125—165), Cambridge,⊸ Ills., on Feb. 9, 1886, says :

In the fall of 1884 I had 156 colonies of bees; in the spring of 1885, 125 colonies, those lost having dwindled. I increased the 125 colonies to 165, during the season, and obtained 2,800 pounds of comb honey, or about 22½ pounds per colony, spring count. The average price per pound that I received for my honey was 13 cents. Our honey season was cut short by dry weather in July, and we had no fall crop. My bees are all in a bee-cave and cellar, and are doing well, so far as I can judge, as they are packed in closely.

Bee-Keepers are Jubilant.—Smith & Smith, Kenton,+o O., on Feb. 15, 1886, write :

Bees have had a fine flight the past week, and are in good condition. On the morning of Feb. 8 the sun rose brightly, with a south breeze soft and balmy; by 12 m. the mercury went up to 50° in the shade, and the bees had a good flight. On Feb. 9, 10 and 11 the weather was clear and warm, and the bees have cleaned out there hives, etc. Very few dead bees were brought out. The bees look clean, bright and healthy. We have talked with quite a number of bee-keepers, and they all report well. We have not heard of a single colony being lost so far. Bee-men all feel jubilant. We have almost all our bees in a cellar, and they are very quiet, and seem to be in splendid condition.

Bees had a Splendid Flight.—T. F. Bingham, Abronia,♀ Mich., on Feb. 15, 1886, writes :

My bees on the summer stands had a splendid flight last week, and have wintered finely so far. They cared very little about flying, though they had no flight for 3 months. In the cellar as well as out-doors, there were hardly any dead bees, and it was as still as a summer eve, though 3 months in the cellar on 5-inch frames. It would please any one to see them cluster below the combs in the open space allowed them for the purpose.

Gathering Pollen.—7—Z. A. Clark, (85—157), Arkadelphia,♂ Ark., on Feb. 16, 1886, writes as follows :

My bees brought in the first pollen on Feb. 13 and 14—about the same time for the past two years. I have lost about 5 per cent. of my bees up to this time, but from now until honey comes in it will require careful attention. Alder is now in bloom; elm and maple are nearly open, and if we have pleasant weather we do not anticipate much trouble. My bees are now beginning to build up. I take out the outside combs that are empty, and replace them with frames having foundation starters in the centre of the brood-nest a little later, and have nice frames of worker combs built. While the colonies are weak they will build worker comb.

Bees Wintering Nicely, etc.—J. H. Tait, Endicott,○~ Nebr. on Feb. 11, 1886, writes :

My bees are thus far wintering nicely, with the exception of 3 colonies that have been very restless for a week or more. I use the Langstroth hive with the portico, and on putting them into the cellar I confined them by wire-screens over the entire fronts of the hives. The 3 colonies referred to filled the fronts and kept beating against the wire until a large number of the bees had perished. I removed the wire, second-story and sheet, scraped out the dead bees and left them for a half hour, and upon returning I found them quiet and apparently happy and contented; there is no indication of disease among them. The remaining 20 colonies are perfectly quiet. The average temperature of my cellar is from 40° to 45°. All my bees have natural stores. Will any of the prominent apiarists please state the cause of the disturbance with these 3 colonies ?

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

☞ The Southern Wis. Bee-Keepers' Association will hold its 3rd. annual meeting at the court-house in Janesville, Wis., on March 9, 1886, at 10 a.m. All interested are invited. JOHN C. LYNCH, *Sec.*

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Feb. 22, 1886. }

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY.—Sales have been quite good this month for best grades of comb honey, some bringing 16c. per pound when in perfect order. There is a light supply here, and now is a favorable time to forward shipments. Extracted honey brings 6@8c.

BEESWAX.—25@26c. per lb.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We note an improvement of sales of honey the past week, but prices continue to rule low. We quote as follows : Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows :—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—The demand is extremely slow for extracted honey. Manufacturers seem to have taken a rest. There is only a fair demand for honey in glass jars, and for comb honey. Prices are unchanged and nominal, with occasional arrivals and a large stock on the market. We quote extracted honey at 4@8c., and choice comb honey at 12@14c. in a jobbing way.

BEESWAX.—There is a good home demand for it. We pay 25c. per lb. for choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market continues about unchanged, except that stocks are somewhat reduced, and possibly a little firmer feeling on extracted honey. The demand, however, is not heavy for this time of the year, and we cannot expect any better prices, as no one seems inclined to hold, and concessions are made in the buyer's favor. Choice 1-lb. sections of comb honey, 15@16c ; 2-lbs., 12@14c. Extracted, 5@7c., according to quality.

BEESWAX.—It is in very light supply, and it would bring 22@25c. for good average grades.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—The sale for honey for the past month has been as light as we have ever known it, and prices are weak. One-pound, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The market is very dull. We quote as follows: White and extra white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 23@25c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is well supplied with comb honey and prices have declined. Best white in 1-lb. sections, 14c.; honey in larger sections can be bought for less.

BEESWAX.—23@25c.

M. H. HUNT., Bell Branch, Mich.

◆

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At One Dollar a Year.

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Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

* * *

Golden Rules for successful advertising, are these : 1. Attractive display. 2. Salient points clearly stated. 3. Repetition. Don't spend all your money in one insertion. 4. Choice of the Paper which reaches the people you want to reach. *These rules never fail.*

* * *

Wire Nails have advanced in price, as will be seen by quotations on page 127, last column.

* * *

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

* * *

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

* * *

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

* * *

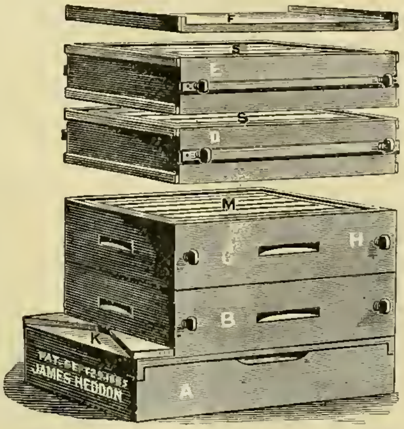
Extracted Honey.—Any one having white extracted honey for sale, are invited to correspond with us. We are paying 7 cents per lb. for it, delivered here.

When renewing subscriptions please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

Advertisements.

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail ; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections ; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand ; a slatted honey-board, and cover ; two 6-inch brood-chambers, each containing 8 frames ; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

HIVES READY TO NAIL.—To filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers :

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices : Stand, 14 cents ; honey-board, 8 cents ; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time : For 10 or more hives, 5 per cent. discount ; for 25 or more hives, 7 1-2 per cent. ; for 50 or more, 10 per cent.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

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Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. *Price List Free.* **J. M. JENKINS,**
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In order to more fully supply the wants of his customers, has entered into partnership with his neighbor, R. L. Taylor, and will offer for sale, bees (full colonies, or by the pound), queens, Given foundation, white poplar sections, hives, cases, feeders, empty combs, etc., etc. Also hens' eggs, for hatching, of three varieties. For circular and price-list, address **W. Z. HUTCHINSON.**
8Etf ROGERSVILLE, Genesee Co., MICH.

40 **COLONIES of ITALIAN BEES for SALE,** together with extra hives, frames and utensils. I intend to move away in the spring. Terms given upon application **L. ADAMS.**
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E.T.Lewis
TOLEDO
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Orders filled the day they are received, except for bees and queens. 8E4t

SEND FOR IT.

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8A4t COUNCIL BLUFFS, IOWA.

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NOTICE.—For $3.00 I will mail direct, Frank Cheshire's great scientific work now publishing in parts, "Bees and Bee-Keeping."—Arthur Todd,—Dadant Foundation Depot—Germantown, Pa.
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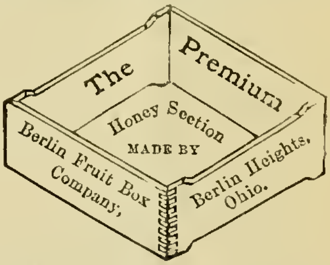

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45 **COLONIES** of Bees, with ample facilities on hand for the accommodation of all the Increase and Surplus. Preparations mostly for extracted honey, though either or both may be worked for to advantage. Safe and convenient wintering repository, good pasture and location,—7 miles north of Omaha. **N. PEARSON,**
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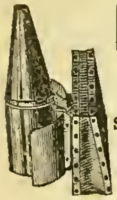

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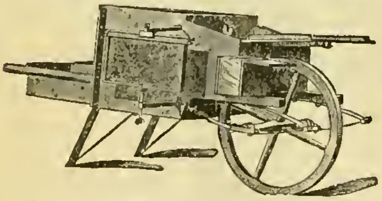

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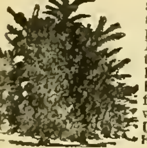

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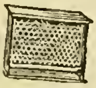

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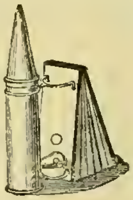

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. March 3, 1886. No. 9.

We Regret to learn that Mr. E. C. Jordan, one of the principal bee-keepers of Virginia, is unwell—having been dangerously ill in Washington. He is convalescing now.

◆

Our Correspondents have rushed in so many communications that we are unable to give one-tenth of them space at present. We have more on hand now than we can use in three months. Please exercise a little patience, and not conclude hastily that communications are refused or gone to the waste-basket.

◆

As a Legitimate Result of the persistent assertions by ministers and others, who know nothing about it, that comb honey is being manufactured by machinery, etc., a turbulent fellow gathered a crowd around him near our office, asserting very vehemently that he knew it to be true that comb was made and filled and capped by machinery, etc.—that he had a *relative* in California who was engaged in the business, and had made and sold lots of it in New York. We produced a letter from the bee-keeper in question, and an article over his signature, on making comb foundation, and his advertisement of it for sale. This he pooh-poohed—said it was only a " blind," etc. He would rather believe the statements of the religious and secular press, than all the evidence to the contrary in the world. Truly, "Where ignorance is bliss, 'tis folly to be wise."

◆

The Christian at Home, a valuable paper published at Asbury, N. Y., reviews our book entitled "Bees and Honey" thus :

> It is an exceedingly valuable book for any person who desires to study the habits of bees or the improved methods of manipulating them and their productions. Nor does the value of the information which the book contains exceed the interest of it. There is nothing in natural history more interesting or more astonishing than a thorough knowledge of the manners and customs of the little creatures who furnish us so much of the sweetness. A vast amount of information has been gathered and stored away in the 191 pages of this book, while the many illustrations help to give clear conceptions of the author's descriptions.

The Rev. Robert West, editor of the *Advance* in this city, two months ago announced editorially that so-called comb was being "manufactured and filled and capped by machinery ;" that a "grocer in this city, who had recently purchased from Ohio 1,000 pounds of what he honestly supposed real honey," was convinced by him in five minutes that it was "made of syrups deftly secured in the comb ;" that he was "familiar" with the place where bogus comb honey was manufactured in this city, etc.

We publicly pressed him for the proof, as our readers are aware, and labored with him by private letters. Mr. A. I. Root also wrote him that he would "willingly spend $1,000 in hunting up the establishment where such an article is made, if it be made anywhere"—adding that "no such thing as manufactured comb honey has ever yet appeared" in "any market in the world." Mrs. L. Harrison also gave Mr. West a severe criticism in the *Prairie Farmer.*

Last week we noted the fact that we had received a letter from him, saying, "I sincerely regret if I have misrepresented an honest industry," and promising a retraction in the next issue of the *Advance.* It has come to hand, and this is what he says :

> "We are very glad to be corrected in statements made in these columns to the effect that honey-comb had been manufactured by machinery. We were misled by what seemed to be good authority."

This acknowledgement is all right so far, and sets the matter at rest, but how few of the papers which have copied it, will notice the retraction ? The mischief is done, and it will take more than a life-time to counteract the damage incurred by such unqualified and positively false statements as were made by Mr. West. He should have further stated that he did *not know* what he was speaking of—was *not "familiar"* with the place where it was manufactured in this city or elsewhere, and that the whole statement was unwarranted—unjust to the bee-keeping interests, and wholly *untrue !*

We are thus particular to note the points, not to stir up ill-feelings, but to warn others from making statements that they cannot prove, which may damage an industry and ruin a large trade.

◆

A Surprise Party consisting of three sleigh-loads (says the Valparaiso *Vidette*), a few days ago, visited the residence of Mr. T. S. Bull, near that city. They were shown the apiary, workshop, tools and implements used in modern bee-culture, and expressed much wonder over the habits and instincts of the bees, and were interested in Mr. Bull's explanations, etc. After enjoying a splendid supper, they returned to their homes having had a nice time.

◆

The Anti-Adulteration Journal is the name of a new monthly published at Philadelphia, Pa., at $1.00 a year, by the "Society for the prevention of adulteration of food, drugs, medicines," etc., at 142 Sixth Street. The adulteration of food of all kinds (including honey) is so general that all honest persons will wish that Society success. A stringent law against adulteration of food is demanded, and we hope such will be enacted by Congress, and be rigidly enforced.

We have a Host of Queries waiting their turn to appear in the BEE JOURNAL. This fact will explain to some why we cannot comply with their request to have their queries answered "next week." Even if there were but few ahead, it takes about a month to get the queries put in type, sent to those who answer them, and have them returned and appear in proper order. We will cheerfully accommodate all, but must have sufficient time to "do the fair thing" by all those who seek instruction in this valuable department. In order to try to "catch up" we have divided our Query Corps into two companies, and sent a different lot of Queries to each, just as a *trial*, and to gain space and time.

◆

As Manager of the National Bee-Keepers' Union, we had engaged a lawyer to bring suit against Rev. R. West, and so informed him—thinking we had given him all the time necessary for a retraction. This is the second time that the Union has served the interests of bee-keepers in defending their rights.

Next month comes the trial of the raisin growers of California against Mr. Bohn, and the Union has taken a hand in the preparation of the appealed case by contributing over $100 to hire an able attorney, affidavits, etc., etc. The National Bee-Keepers' Union is a "power in the land," and is working energetically for the defense of the rights of our chosen pursuit. If the reader of this has not yet joined the Union, he should do so at once.

◆

Hay and Straw, pressed in a strong hay press, are to be used for making hives. We have a model in our Museum from Orr, Rotramel & Co., of Carlisle, Ind. Such walls are non-conductors of heat and cold, and do not gather dampness. They are trimmed by a knife and plastered outside with cement. Hay is also used for building dwellings, conservatories, etc., and it is said that the tenderest plants bloom within such walls during the severest Northern winters.

◆

New Price-Lists have been received from the following persons :

J. P. Moore, Morgan, Ky.—4 pages—Italian Queens and Bees.

North Carolina Tar-Heel Apiaries—1 page—Bees, Queens, Comb Foundation, etc.

Reynolds Bros., Williamsburg, Ind.—16 pages—Bee-Keepers' Supplies, Bees, Queens, etc.

Sumner & Prime, Bristol, Vt.—20 pages—Bee-Keepers' Supplies.

E. M. Yeomans, Andover, Conn.—3 pages—Italian Queens, Bees and Nuclei.

Will J. Stratton & Bro., Atwater, O.—16 pages—Vegetable Seeds.

Ellwanger & Barry, Rochester, N. Y.—142 pages—Ornamental Trees, Shrubs, Plants, etc.

Lewis Roesch, Fredonia, N. Y.—22 pages—Grape-Vines, Plants, etc.

John S. Collins, Moorestown, N. J.—30 pages—Small Fruit Plants.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

◆

One of the Prettiest Marches published this season is the G. A. R. Grand March, by Wiegand, price 40 cents, Ign. Fischer, publisher, Toledo, O.

QUERIES
WITH
REPLIES by Prominent Apiarists.

Wild Plum-Trees and Melilot Clover.

Query, No. 207.—1. Do wild plum-trees yield honey when in bloom?

2. Will sweet or melilot clover do well among trees where it will be shaded to a considerable extent?—C. M.

1. I think so.—G. M. DOOLITTLE.

1. Yes.—W. Z. HUTCHINSON.

1. Yes, they do here; I think they do in most localities.—JAMES HEDDON.

1. Yes. 2. Yes, but it will do better on waste ground, and will produce more honey.—DADANT & SON.

1. I have seen bees work on them, and I think they get honey from them. 2. Yes.—C. C. MILLER.

1. Yes. 2. Not so well as when unshaded.—A. J. COOK.

Wild plums yield honey nicely here. Melilot clover succeeds poorly here in the most favored spots. Low, moist places give the best results.—G. W. DEMAREE.

Large or Small Hives---Which?

Query, No. 208.—I am so situated that I can keep but a limited number of colonies, and those will be in 2-story chaff-hives. The top story will hold 10 wide-frames. Would it be best to make the brood-chambers wide enough to hold 13 Langstroth brood-frames, and use a division-board when needed? or make it only wide enough for 8 frames?—Cashier, Nebr.

In this location I should make them the capacity of but 8 frames.—JAMES HEDDON.

I should prefer the 13-frame hive and use division-boards or dummies for contraction.—G. M. DOOLITTLE.

I should prefer chaff hives to hold 13 brood-frames, and contract with division-boards for winter.—G. L. TINKER.

Under the *circumstances* I would use a division-board.—W. Z. HUTCHINSON.

In my locality 10 Langstroth frames, or their equivalent in space, is about right. If you use division-boards you can govern the size best suited to the needs of your bees, even though you choose to make room for 13 frames.—G. W. DEMAREE.

Make the brood-chambers for 12 or 13 frames, by all means. If you make them large enough, you will not have a chance to regret their small size. A large hive can always be adjusted to the size of the colony; a small hive cannot. The difference in cost is insignificant, considering the advantages.—DADANT & SON.

It depends upon so many things that it is hard to give a categorical answer. If size and weight are no objection, perhaps you had better have the wider hive.—C. C. MILLER.

Why make chaff hives? I prefer single-walled hives and cellar wintering. Chaff hives are awkward, heavy and expensive. I should make the brood-chamber for 8 frames.—A. J. COOK.

No, sir; a 10-frame, full size Langstroth is just the right size, in my opinion, for a brood-chamber. It will hold frames enough for the best season, and give room for winter packing. I am aware that a *few* differ from me, but a trial will convince any unprejudiced person that I am correct.—J. E. POND, JR.

Surplus Arrangements.

Query, No. 209.—What kind of crates, wide frames or other arrangements are the best for producing surplus honey?—W. T.

The kind with which you succed the best.—H. D. CUTTING.

I like the Heddon crate or case very much. This, however, does not permit the use of separators.—A. J. COOK.

Wide frames holding sections, I think, is the best arrangement for surplus comb honey yet invented.—H. R. BOARDMAN.

Wide frames containing but a single tier of sections.—G. M. DOOLITTLE.

If separators are not needed, I prefer the Heddon case; if they are, then the wide frames one tier of sections high.—W. Z. HUTCHINSON.

In my opinion plain cases just bee-space deeper than the section used, and of the same size of the brood department of the hive, made so that they will tier one on the other, are the simplest, cheapest and best things out. The fewer "gim-cracks" about the surplus case the better it is.—G. W. DEMAREE.

The kind *I* use, of course. At present I use one of which I do not know the name, a little like the old Heddon, but with **T** tin rests. What I will use in five years from now, goodness knows!—C. C. MILLER.

I prefer to have the sections massed together in a case without separators. Then if the sections have side-passages the supers will be to the bees as if there were no partitions and the combs all one. The secret in getting nice combs in sections without separators, is having a narrow case to hold only 4 or 5 sections wide. I am not surprised that some bee-keepers who have used a case one foot wide without separators, should at last decide in favor of separators. I also have failed to get nice, straight combs in wide cases. Wide frames are always stuck up so much with propolis that I have discarded them.—G. L. TINKER.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; O+ east; +O west; and this ♂ northeast; ⊸ northwest; O- southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Apicultural Discussions, etc.

DR. C. C. MILLER, (179–340).

As I think over the bitter personalities that were so common years ago in the columns that bee-keepers like so well to read, there is a great feeling of satisfaction that that trouble is all in the past, although I know it took some editorial back-bone to make it willing to stay in the past. I so much enjoy the peace and quiet of later years that I deprecate anything that squints, in the least, in the direction of a return to the past. Possibly I am unnecessarily alarmed, but it seems to me just a speck of a cloud begins to threaten, as I read what points to a controversy over the Heddon hive. Not that I think controversy should be repressed—perhaps we cannot have too much of it so long as it is conducted in the right spirit. The Dadant-Hutchinson battles over the size of hives were of that character that both combatants won renown. Although perhaps the question in dispute may not be fully settled, good points have been brought out, and it made pleasant reading all through, because neither contestant appeared to lose his temper and indulge in personal flings.

But with reference to the Heddon hive, W. F.Clarke starts with a "come on," as who should say, "You just dare to say a word against the Heddon hive!" and even W. Z. Hutchinson loses his usual equilibrium and puts a chip on his shoulder, talking about the great blow of opposition before any blow began; then another begins to talk on the other side, using something else than square argument—brethren, please don't! Do you not see how easy it will be for this thing to run into just the kind of discussion that we do not want? Bro. Newman, if we get back to one of the old sort of personal quarrels, please leave it all out of the copy of the BEE JOURNAL that you send to me, and print instead quotations from the old poets.*

When any man puts before the public a new thing, especially if it be patented, that public has the right to discuss it. It is entirely proper for A to say that no other hive but the Heddon should be used, giving reasons for such belief; and it is just as proper for B to say the hive is worthless, giving reasons for such belief. For my part I shall be glad to see plainly shown every advantage that the hive may possess, and every objection that may be brought against it. Aside from any interest in the hive itself, this may incidentally bring out points of interest to those who have never seen, and who never care to see the hive.

There are some principles of the hive that I should like exceedingly to use. The ability to have a contracted brood-chamber, and at the same time have brood under each and every part of the surplus chamber, is something I have dreamed over not a little. This accomplishes it to perfection. On the other hand, without having tried it, it hardly seems that I could reconcile myself to fastening and unfastening with thumb-screws. Like many another thing, however, familiarity with it might take away all objection, but at present it seems "fussy." Will not the space between the upper and lower half of the brood-chamber be filled with comb and honey? Perhaps, however, I ought to stand this, as Mr. Heddon has helped me to get rid of this difficulty under the sections, where it is still more objectionable. The greatest objection, perhaps I ought rather to say the most serious question I have, is as to wintering. Is that open space between the two sets of shallow frames a thing the bees will like in winter? One tier of the shallow frames will give capacity enough for wintering, and if they will winter well on such shallow frames, this will be a very nice arrangement. Indeed, I should like it very much, for it would make nice, light handling, and occupy much less space in the cellar. We shall probably have some reports on this point in the spring, from those who are making the trial.

To those who adopt his hive, Heddon's book is indispensable, and interesting to all. The valuable, practical hints which it contains make it a real accession to the somewhat limited number of books on apiarian subjects.

Speaking of books, I notice that Frank Cheshire's book is advertised in parts, at $3. As that is a pretty good price to pay for a book unless we know something about it, can we not have some information on the subject? In what shape is it? In two or three volumes, bound in cloth, or does it come in monthly numbers, and are all the parts on hand now, or part unpublished? Please let us know something about it.†

BEES SWARMING OUT IN SPRING.

I want to say a word anent Prof. Cook's reply to Query, No. 200. I had, perhaps for the first time, last spring, considerable experience with bees swarming out, leaving plenty of honey and brood in the hive. I do not believe. Professor, that it could have been from anything "obnoxious about the hive." In nearly every case, if not every case, the colonies had been previously put into fresh, clean hives. The only thing that I could discover unusual was the very large quantity of brood in proportion to the number of bees. Whether this may be the true reason I cannot say. Several of the replies seem to favor it. It could hardly be, as Messrs. Dadant & Son suggested—"lack of pollen or of water," in the case of my bees. If the lack of bees enough to cover the brood should be the cause of the difficulty, Dr. Tinker's suggestion to carry the bees into a warm place for a time, might work. A more radical plan would be to take away one or more frames of brood containing the least amount of sealed brood, and giving them to a strong colony. Even if the brood taken away should be destroyed, it would be better than the destruction of the colony.

Marengo, ꝯ Ills.

[*Bro. Miller is right; but there will be no *war* among the correspondents of the AMERICAN BEE JOURNAL. Some writers use very vigorous language, but they are harmless as doves. Should the discussion show indications of anger, we shall promptly shut down on the whole subject until all parties are willing to discuss it in a friendly way—as *brothers*. Criticisms made in any other spirit will be useless. *There will be no war*, Brother Miller; rest assured of this.

†Mr. Cheshire's book is now being published in parts. When complete, it will be offered in a bound volume. About 6 parts are now issued. There will be 19 in all.—ED.]

For the American Bee Journal.

The New York State Convention.

The New York State Bee-Keepers' Association commenced its annual meeting in the Court House, at Rochester, N. Y., on Feb. 16, and in the absence of President Root, the chair was taken by Vice-President C. G. Dickinson, of Oxford, N. Y.

The minutes of the last meeting were read and confirmed.

The Treasurer reported $15 paid to Mr. Potter, and the balance of $8.93 paid to the janitor.

EVENING SESSION.

Pres. Root called the meeting to order at 7:15, regretting that he was not present at the opening session, and expressing the hope that the same spirit might prevail as at Detroit. The meeting then proceeded to discuss the prevention of after-swarms.

F. L. Smith said it could be done by removing all cells after six days, except one.

R. B. Rians practiced the moving the old hive, cutting out the cells, and had but little trouble.

L. C. Root thought it a good plan to have a good laying queen to introduce immediately, so that the colony may not be queenless a day.

A. Strauss cuts out the cells on the first and second day, also on the 7th.

F. L. Smith—The queen introduced must be a young queen; an old queen will get up a swarm in about two weeks.

Mr. Whiteneck—The great trouble about introducing a young queen is that the bees are liable to swarm out and leave the hive when she takes her bridal tour.

The question, "Does it pay to raise Alsike clover for honey," was then discussed.

Mr. Davis found it hard work to persuade his neighbors to sow it, but it was an excellent honey plant. The red clover is failing, and Alsike is coming in to take its place.

Mr. Aspinwall said that Alsike would grow in rough places, and was excellent for honey.

Mr. White said that it would pay to sow it for honey alone.

Mr. Rians said that for two years the bees had gathered largely from the basswood, but this year the flow was thin.

W. E. Clark thought the yield of Alsike varied considerably in different localities. On valuable land it would not pay to grow it for honey alone, but on clay land it yields bountifully. For the last two years he obtained more from Alsike than from basswood.

Mr. Knickerbocker said it makes the best of hay, and yields honey when it is so dry that white clover does not secrete any.

L. C. Root mentioned the case of a bee-keeper who got 100 pounds of honey per colony from Alsike clover.

Mr. Dickinson was prepared to affirm that bees do gather from red clover.

Mr. Vandervort said that the key to the whole thing was in the fact that we do not all live at the same altitude. The altitude makes a great difference in the secretion of honey. He had noticed that the honey in red clover is secreted on the side of the tube at times, so that it does not need long-tongued bees to gather it. When the Italians first came to this country with the reputation of being red clover bees, he proved this; fifty colonies gathered 50 pounds per colony from red clover, and the blacks none.

The sale of honey was next discussed. Mr. Davis had labored for 20 years to establish a market.

Mr. Vandervort was of the opinion that if we could produce honey a little cheaper, it would sell more readily.

Mr. Aspinwall urged the education of the masses in the consumption of honey.

Mr. Davis said that for 20 years the the tendency of the price of honey had been downward, and he thought it had now touched bottom.

Mr. Vandervort said that in lessening the cost of honey production he had secured as much profit as when the price was better.

The question of the desirability of instructing our neighbor in the art of bee-keeping was then discussed. Mr. Ashley said: If in the supply business, yes; if not, no.

Mr. Murdock—The supply business is the tender spot.

Mr. Schofield—If our neighbor is rightly instructed, it will not help the supply dealers.

Mr. Dick—It is a different thing instructing your neighbor and instructing those who come to conventions.

W. E. Clark thought we should do to others as we would that others should do to us.

L. C. Root was of the opinion that we are not doing our neighbors a favor to instruct them in bee-keeping, while honey is at its present price.

WEDNESDAY MORNING.

Pres. Root called the meeting to order at 9 a.m.

After the appointment of some committees, an address was delivered by P. H. Ellwood, of Starkville, N. Y., on "Apiculture as a pursuit." In connection therewith, a paper by Arthur Todd on the "Marketing of our products," was read. The two topics were discussed conjointly. The adulteration of honey was, as usual, pointed out as a great hindrance to the development of bee-keeping, and a damage to the price of honey. Cultivation of a home market, employment of middlemen, services of drummers, peddling honey, and various other side issues were adverted to.

W. F. Clarke said it was of no use to fight the laws of trade. One of them was that cheapness increased consumption. The history of penny postage, and of all cheap things proved this. The cheapest railroad on this continent was the most traveled, and he believed it was the only one that had a quadruple track. Much was said about keeping up the price of honey. We would be better employed in bringing it down. Merchants who try to do a big business sell cheap, and sometimes run off goods below cost to win custom. Mr. Todd was right in taking the ground that the best way to increase the consumption of honey was to reduce the cost, so that it would be as cheap as sugar. Then it would be a necessary of life, and would sell itself. We do not advertise honey enough. Some one has said he who does business without advertising is like a man who winks at a pretty girl in the dark. He may know what he is doing, but no one else does. People do not need to be educated to eat honey any more than to drink milk. Let them see the tempting thing, and the appetite will spring up for it soon enough. Show the public the value of honey as food and medicine, and it will be consumed largely without fear. Patent medicine venders understand their business. They placard their nostrums on all vacant fences, make the rocks vocal, the result is people buy and use the articles thus conspicuously advertised. "Let your light" shine, and people will avail themselves of it, never fear.

AFTERNOON SESSION.

The President's address and a paper by Rev. W. F. Clarke on the question, "Does bee-keeping pay?" (See page 121) were discussed conjointly at some length.

Mr. Davis, of Vermont, was asked the cost of producing a pound of honey, and replied that there was nothing in it at less than 18 or 20 cents a pound. He was in favor of producing a choice article, and keeping up the price.

The best surplus arrangement was next discussed, and the discussion glided into size of sections, with the usual preference for the one-pound section, as more easily marketable.

The election of officers resulted as follows: President, W. E. Clark, Oriskany; Vice-President, C. G. Dickinson, Oxford; Secretary, George H. Knickerbocker, Pine Plains; Treasurer, J. H. Scofield, Chenango Bridge.

Representatives were elected, on nomination, for every county in the State.

The committee on resolutions reported as follows:

That this Association would record its grateful appreciation of the action of the United States Department of Agriculture in establishing an apicultural station at Aurora, Ills., in charge of Mr. N. W. McLain, from whose experiments much benefit is expected by the bee-keepers of the land.

Resolved, That in token of said appreciation, this Association will henceforth adopt as its distinctive badge, the national colors—red, white and blue.

Resolved, That this Association has read with pleasure the public announcement made by Thurber, Whyland & Co., that they will hereafter put up no more comb honey in glass jars, with glucose around it, which they have heretofore done to the detriment of the honey industry, and which has subjected them to severe criticism by this Association, and the bee-keepers at large.

A paper was read from J. M. Shuck, of Des Moines, Iowa, on "Reversing hives, frames and sections;" also one entitled "Midnight musings of a New York bee-keeper." The two were made the basis of a long discussion on the principle of reversing, in the course of which the Heddon hive received a large share of attention.

THURSDAY MORNING.

The amount of increase preferable in connection with the production of comb honey was the first order of the day. It was agreed that the answer to the question depended much on location.

An address by L. S. Newman, of Peoria, N. Y., followed, on the "Production of comb honey with and without separators in wide and narrow sections."

On motion, it was decided to take a vote on the use of separators. The Association, by a rising vote, expressed its preference for separators.

The committee on resolutions presented the following:

WHEREAS, The best interests of our calling require more thorough work in creating a market for our products; and

WHEREAS, We feel certain that, with proper effort, the demand for honey for medicinal, manufacturing, and general table purposes may and should be greatly increased; and

WHEREAS, We believe that these results can be best accomplished through the efforts of those who are thoroughly conversant with the best interests of bee-keeping in all of its branches, and who are also acquainted with and command the confidence of bee-keepers generally by their unquestioned honesty. Therefore, be it

Resolved, That we, the bee-keepers of the State of New York, in convention assembled at the city of Rochester, this 17th day of February, 1886, do appoint L. C. Root as a person fully qualified to work for our interest as above expressed, and that we hereby instruct him to take such action and make such investigations as in his judgment will result in our greatest good.

Resolved, That we invite each member of the Association, as well as bee-keepers generally throughout the country, to aid him in his efforts, the results of which he shall present to this Association at its next annual meeting to be held in Albany on Jan. 18–20, 1887.

The resolutions were adopted, and a committee of three appointed by the President to co-operate with the commissioner.

On motion, it was agreed that the necessary expenses connected with the effort to improve the honey market be raised by an assessment *per capita* on the members of the Association.

QUESTIONS AND ANSWERS.

Is it advisable to rear drones in more than one hive? Yes.

Would it be beneficial to distribute the pamphlet on "Honey as Food and Medicine" more widely? Yes.

Do bees polish off the cappings with their "tother end?" Yes.

Why does some honey granulate quicker than others? No answer.

Which is the best hive for general use? Your own.

Which pays best, comb or extracted honey? No answer.

Is it advisable to use full sheets of comb or strips in the brood-chamber? Full sheets.

Is it a good plan to clip the queen's wing? One member responded "yes."

Is it advisable to have a bee-space between each tier of sections? A general response in the affirmative.

Is it desirable to have plenty of brood in hives when they are taken out of winter quarters? Yes.

In wintering on the summer stands is it desirable to pack under the bottom of the hive? Yes.

Is there any good reason for setting hives close to the ground? No.

For a double-walled hive, is a quarter inch dead-air space enough? No.

Which man seems to know the most about bee-keeping, the expert or the beginner? The beginner, every time.

Are not tin separators on the whole the best? Several novices, "no."

The committee to consult with Mr. L. C. Root and co-operate with him in improving the honey market was nominated by the President as follows: Messrs. Aspinwall, Benedict, and Ira Scofield.

The committee on exhibits reported a list of articles displayed for the use of bee-keepers. Report adopted.

On motion, thanks were voted to the proprietors of the National Hotel, for reduced rates; to the Monroe county officials for the free use of the Court Room, and to the reporters of the city papers for their attendance and reports of the proceedings.

The Association then adjourned *sine die.*

For the American Bee Journal.

Revolution in Bee-Keeping--Criticisms.

WM. F. CLARKE.

Mr. Alves comes with a jaunty air, and with apparently hostile intent, but lo! it is on the same side! He has, however, some questions to propose. The first relates to the machinery used in the new reversible hive. First, is there not too much? This may be answered by another: How could there be less? Simplicity of action is the great thing in any machine. Most certainly we have simplicity here. There is not a complex feature about the hive.

2. The demand for mechanical nicety and accuracy is an excellence rather than a defect. For the minimum of friction, there must of necessity be precision.

3. Can a $4 hive be afforded? Yes, a $10 one if necessary. The interest on $4 is hardly 25 cents a year.

4. No, the interchange of two shallow hanging-frame hives will not answer all the practical purposes of inversion. It will not shake the bees and queen from the hive, nor expose queen-cells, nor secure their easy removal without disturbing a frame. These are important practical purposes, and they are secured in a twinkling.

It must be highly gratifying to Mr. Heddon that his hive and book have met with so prompt an endorsement by practical bee-keepers. Opposition to them comes only from a Kentuckian who has never had to face the more serious difficulties of bee-keeping, and whose personal antagonism to Mr. Heddon largely discounts in advance his criticisms on the new departure. He tells us that there is not a single new feature about the system that is of intrinsic value. Of course, then, he will not adopt that which is worthless. To do so would be to contradict the position he has taken. But is it not a valuable feature that we can now manipulate hives instead of frames, and so perform the work with half the time and labor formerly required? Is it not an idea of intrinsic value to have controllable brood-nests? The mechanical means by which this is done is of the very greatest intrinsic value.

Mr. Demaree is making history. What is the history of every new invention? Is it not the linking of old ideas to valuable uses? Franklin caught the lightning on his kite-string, but a Morse was needed to yoke it to the electric cable, and give it intrinsic value. The uses of steam have long been known. It has lifted the historic tea-kettle lid from time immemorial, but only became of intrinsic value when it was made to fill the boiler and drive the piston-rod. Steam as an agent has been known for ages, but the man who harnessed it to the locomotive made it of intrinsic value. Sectional hives are not new, but their use in practical bee-keeping has only now come to the front and assumed intrinsic value. Mr. Demaree threatens to burst the whole thing. He can only do it by infringing the patent. There is a moral barrier in the way of his doing this, and if there were not, the penalty for infringement blocks the way effectually.

We have all used the tiering-up method for taking surplus honey, but tiering down is a new and original idea for which we are indebted to Mr. Heddon. Mr. Demaree says there are few independent writers on apiculture. Of course he is one of the few. He will "hew to the line" regardless where the chips may fall. They are few and scattering as yet, but perhaps will fly thicker as the axe gains in power. That a new revolution is upon us, becomes daily more evident. No power can check it, and the sooner we fall into line, the less we shall have to unlearn.

Mr. Demaree is ahead of me in having read the patent. He will have to read it again when re-issued, and made to cover the ground more fully. But, after studying the hive, and learning its many uses. I still consider it new and orignal, and predict for it wide and general adoption. This will not necessitate hasty change. Those who are using other hives, can readily adapt them to the new order of things, and avail themselves of such features as are of intrinsic value. That the new hive will gradually supersede all others, and become the "standard of excellence" is one of the inevitables to which Mr. Demaree will have to bow, with the best grace he can command. Opposition will but hasten the ultimate issue.

Mr. Demaree says that he is simply amazed at my article. He will be still more amazed when he finds himself adopting the hive, and joining me in commendation of it. I shall use no other in my future dabblings in bee-keeping. This is what I want, and all I want. It is "long-looked-for, come at last." I have dreamed of a hive like this, and the reality surpasses the dream. It will henceforth be a luxury to keep bees. The hard, slavish work is all taken out of the business, and what remains is mostly pastime. The danger now is that bees and bee-keeping will become too common. Everybody will want to rush into a business so inviting. But little honey will "waste its sweetness on the desert air" in the "good time coming." With the winter problem solved, and this simple principle of handling hives instead of frames brought into use, there is no good reason why honey should not become as cheap as sugar. Then it will rank among the necessaries of life, and be in universal demand. The market for it will be practically unlimited, and it will come into use in a thousand forms unknown before. It only now needs that the improvement of the bee itself shall keep pace with the improvement of the hive, and all the possibilities of bee-keeping will be realized.

Guelph, Ont.

For the American Bee Journal.

The Northeastern Michigan Convention.

The Northeastern Michigan Bee-Keepers' Association held its fourth annual meeting on Feb. 3, 1886, at East Saginaw, Mich. The following subjects were discussed:

USING COMB FOUNDATION.

Dr. Whiting—The two or three years that I used comb foundation without wires I spent much time cutting out the stretched portions of the comb and fitting worker comb in its place.

James Ure—I use foundation 6 feet to the pound, and have little trouble with its sagging. If it does sag it is always at the top where it will be filled with honey.

W. Z. Hutchinson—This stretched part would be at the bottom if the frames were reversed.

James Ure—I would no sooner invert a bee-hive than I would turn a house upside down. The most of my comb foundation is drawn in the spring. I do not hive swarms upon foundation.

WINTERING BEES.

Dr. Whiting—Previous to this winter my hives have been packed upon only three sides; I now think that a hive packed on only three sides is not much better than one that is not packed at all.

W. E. Harris—I have always packed my hives on all sides, still I have lost many bees in the spring. In the Saginaw valley we cannot have cellars, and I should like to know something about houses above ground.

Dr. Whiting—I have known of bee-keepers who were very successful for several years in wintering their bees in houses above ground, but sooner or later there always came a winter when they lost their bees.

Dr. C. E. Rulison—I believe that the only sure way of wintering bees is to give them good stores and put them into a warm cellar.

J. E. Wellington—I have noticed that when bees are uneasy in the fall they seldom winter well. They should be prepared for winter early. I think they will winter upon clover honey.

Dr. Rulison—The clover honey is all right, but we want that to sell; sugar is cheaper and just as good for winter stores.

J. E. Wellington—I admit it. I was not advocating using clover honey for winter stores, in preference to sugar; I only wished to say that I thought clover honey as safe food for winter.

O. J. Hetherington—At Lansing, last winter, our President, R. L. Taylor, said that he had prepared nearly all of his 200 colonies for winter by selecting combs that were practically free from bee-bread, feeding the bees sugar, and wintered them in a cellar. I should like to know how they wintered.

Pres. Taylor—I never had bees winter better. They seemed to be stronger in the spring. I do not mean stronger in numbers, but healthier, as though they had wintered perfectly. They seemed unusually bright, clean, strong and active, and there was no dwindling.

W. E. Harris—The feeding of sugar puts more honey upon the market, it causes the public to look with suspicion upon our honey, while sugar is not much cheaper than the darker grades of honey which are almost impossible to sell.

R. L. Taylor—It is true that fall honey sells slowly, and at a low price, but the question is, is it not better to take out this fall honey and sell it for what it will bring, and then feed sugar, than to leave it in and lose the bees?

W. E. Harris—Yes, if you are sure that the sugar will save them. I should fear that late feeding would start breeding. How long does it take to feed a colony?

R. L. Taylor—The feeding is done so quickly, never requiring more than 3 or 4 days, that brood-rearing is not started at this season of the year.

W. F. Card—When should bees be taken from the cellar?

R. L. Taylor—Leave them in until there is something for them to do.

W. F. Card—Is it advisable to take them out for a flight, and then return them?

W. Z. Hutchinson—I have tried this. Those that were in a healthy condition remained so; those that were diseased, it did not save.

DIFFERENT RACES OF BEES.

W. Z. Hutchinson—Were my apiary devoted exclusively to the production of comb honey, I think I should choose pure blacks.

Dr. Rulison—I am surprised to see a man stand up in a convention and make such an avowal. I prefer Cyprians, Syrians or Italians. The Cyprians are the best honey-gatherers. When I have plenty of time I can handle Cyprians without a veil or gloves; when in a hurry I want both.

Dr. Whiting—In a poor season the Italians will gather more honey than the blacks. Of course blacks make whiter, straighter combs, and are less inclined to fill the brood-nest with honey.

W. Z. Hutchinson—I agree to all this, and will add that when the great honey harvests come, from which we get our surplus, the blacks will store just as much.

Dr. Whiting—I think there is a great difference in different strains of the same variety of bees. I was much annoyed by some colonies that had a strange propensity to build brace-combs in every conceivable place. By destroying their queens, and giving them others, I finally succeeded in nearly eradicating this trouble from my apiary. I think much can be done by selection.

TOP-STORING VS. SIDE-STORING.

Dr. Rulison—With me the bees work more readily in the side boxes, but they put in too much pollen, and I have abandoned it.

Dr. Whiting—Bees are inclined to put their pollen in the combs nearest the entrance. If the combs are used crosswise to the entrance, and the sections put in the back end of the hive, there will be no pollen placed in them.

QUEEN-REARING.

W. E. Harris—I have found it quite an advantage to cut into strips the comb containing the eggs from which I wish to rear queens, and put these strips, with the cells, in a vertical position, between the upper edges of the combs, holding them in position by pressing the combs together against the strips. The colony must of course have no other eggs or unsealed brood. By destroying some of the eggs, *a la* Alley, the cells can be secured in the places wanted. When the cells are finished they can be easily removed by simply moving the combs apart.

HIVING SWARMS WITH WING-CLIPPED QUEENS.

R. L. Taylor—I clip my queens' wings, and do not see how I could get along without so doing. When several swarms issue at nearly the same time, I simply cage the queens. If the swarms cluster together it does not trouble me. I just take enough from the cluster to make a swarm, hive them and give them a queen, and continue to do this as long as the supply of bees and queens holds out.

The officers are as follows: President, R. L. Taylor, Lapeer, Mich.; Vice President, W. E. Harris, South Bay City; Secretary, W. Z. Hutchinson, Rogersville; Treasurer, Dr. L. C. Whiting, East Saginaw.

The convention adjourned to meet in Bay City, Mich., on the first Wednesday in February, 1887.

W. Z. HUTCHINSON, *Sec.*

For the American Bee Journal.

Wintering Bees in the Cellar.

EUGENE SECOR.

January was a cold month; February, so far, has been quite mild. On some days bees could have flown. My 32 colonies, put into the cellar during the forepart of November, have not seen daylight since, and I hope that they will not until the middle of April. They appear to be wintering finely—showing but few dead bees and small consumption of honey. A thermometer, hanging in the room all the time, has shown extremes of 37° to 48°, the mercury generally standing at or near 44°. Part of the hives are raised one inch from the bottom-boards, and the honey-boards lie evenly on top. They appear to be dryer and sweeter than those resting down on the bottom-boards. The cellar is quite dry. A soft-coal furnace is in constant use in an adjoining room, which overcomes the natural dampness in the whole cellar.

I am satisfied that a great many who winter bees in cellars do not keep them warm enough. If the bees are uneasy, some people think it is because they are too warm, when the contrary is the fact. To illustrate: A neighbor has had a colony in the north side of his house for a number of years. They are next to his bedroom. He tells me that when the weather is severe he can hear the bees roar. He then leaves the sitting-room door open, and as soon as the room gets warm next to the bees, they quiet down immediately. My neighbors who have lost their bees in trying to winter them in cellars, have allowed the rooms to become too cold. If very damp, cold is fatal to bees, so I believe, and so I teach; and the fact that I have had the best success in wintering bees of any one in this part of the State, is evidence, to me, of the soundness of the doctrine.

Forest City, Iowa, Feb. 22, 1886.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00..	
and Gleanings in Bee-Culture	2 00..	1 75
Bee-Keepers' Magazine	2 00..	1 75
Bee-Keepers' Guide	1 50..	1 40
The Apiculturist	2 00..	1 75
Canadian Bee Journal	2 00..	1 75
Texas Bee Journal	2 00..	1 75
The 7 above-named papers	6 50..	5 50
and City and Country	2 00..	1 50
New York Independent	4 00..	3 30
American Agriculturist	2 50..	2 25
American Poultry Journal	2 25..	1 75
Journal of Carp Culture	1 50..	1 40
and Cook's Manual	2 25..	2 00
Bees and Honey (Newman)	2 00..	1 75
Binder for Am. Bee Journal	1 75..	1 60
Apiary Register—100 colonies	2 25..	2 00
Dzierzon's Bee-Book (cloth)	3 00..	2 00
Dzierzon's Bee-Book (paper)	2 50..	2 00
Quinby's New Bee-Keeping	2 50..	2 25
Langstroth's Standard Work	3 00..	2 75
Root's A B C of Bee-Culture	2 25..	2 10
Alley's Queen-Rearing	2 50..	2 25
Farmer's Account Book	4 00..	3 00
Guide and Hand-Book	1 50..	1 30
Heddon's book, "Success,"	1 50..	1 40

Convention Notice.

☞ The New Jersey and Eastern Bee-Keepers' Association will hold their ninth semi-annual convention at Cooper Union (Room 22) in New York City, on Wednesday, March 10, 1886, at 9:30 a.m. All who are interested in bee-culture or honey are respectfully invited to attend. We expect a large delegation from the Philadelphia Association to meet with us, and it promises to be one of the most interesting as well as instructive conventions that this Association has ever held. A special invitation is extended to ladies, well knowing that they are by no means a small factor in our industry. Beginners, it is well known, will learn more by attending one good convention than a year of practical experiments will teach them. All are requested to bring something to exhibit, and if you cannot come, send us an essay to read on some live subject.

W. B. TREADWELL, *Sec.*

Local Convention Directory.

1886. *Time and place of Meeting.*

Mar. 10.—N. Jersey & Eastern, at N. Y. City, N. Y.
W. B. Treadwell, Sec., 16 Thomas St., New York.

Mar. 20.—Patsalaga, at Arcadia, Ala.
M. G. Rushton, Sec., Raif Branch, Ala.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bees all Right Now.—J. Q. Wells, Boone Grove,⊸ Ind., on Feb, 24, 1886, says:

I use the American hive, or, in other words, a hive composed of 9 frames 12 inches square inside, making the hive 13 inches square inside. From 31 colonies, last year, I extracted 16 barrels of honey, 32 gallons to the barrel, and increased my apiary to 52 colonies. There are no bees of any consequence within 5 miles of mine. Bees are wintering finely so far, but the worst time is yet to come. I winter my bees in the cellar.

Uniting Queenless Colonies.—V. Heinemann, of Valparaiso,⊸ Ind., practices the following plan:

My method of uniting queenless colonies with colonies that contain queens is as follows: Take the bottom-board off the hive of the queenless colony, and place it on the hive which contains the queen, leaving the honey-board with communications on the lower hive; close the entrance in the top hive, and give a little smoke to each colony. This must be done in the evening, after the bees quit flying. The queenless colony should be left on from 24 to 48 hours. If the queenless colony has not united with the lower colony at the expiration of the time mentioned, they should be brushed down. This plan I have practiced for a number of years, and I have never lost a queen or bees by its use.

Disinfecting Foul-Broody Hives, etc.—G. J. Pease, Ann Arbor,⊸ Mich., writes:

In the spring of 1884 I had 8 colonies of bees, 6 of them gave me 500 pounds of comb honey, and 300 pounds of extracted honey; one colony stored 230 pounds of it. My bees had the foul brood, but I did not know it until the spring of 1885. I then commenced smoking them with thyme, as per the Bee Journal, only more thoroughly, giving each hive from 25 to 75 puffs from the smoker each morning before working hours. I think it may have done some good, as 6 colonies stored over 600 pounds of honey in the season of 1885, and 3 colonies sent out swarms, but they soon returned to their old home. I gave them plenty of room, tiering-up several stories in height. They all seemed to be full of bees, and putting in full time. Foul brood increased as the honey-flow ended, and in the fall of 1885 I submitted a sample of comb to one of our best and most scientific apiarists for advice. He advised me to destroy the bees. I did it with sulphur. I have 10 hives, 8 supers, bottoms and covers, frames and sections, boxes in all conditions, some empty, some filled with comb, and some partly filled; some very nice and white, and some dark; some filled with honey, some partly filled, some with foundation starters; the honey candied—all a confused mass, and mostly stacked up in my honey-room. My apiary was on tin and iron roofs over buildings. From accounts of the foul brood malady all the roofs must be more or less infected. I am desirous to re-stock my apiary, if I can do so with a good prospect of success. I wish to have advice, first, as to how to disinfect adjoining roofs; second, will a coat of paint make my apiary roof all right? third, for disinfecting hives, will painting them with some solution, or boiling, be the cheapest and most effective? and fourth, how can I best utilize candied honey in the comb, there being dark comb and some foul brood in a few frames?

[Will some one having had experience with foul brood please reply to the above.—Ed.]

Honey-Comb.—W. J. C., Brown Co., Ills., asks the following:

Is honey-comb digestible?

[No.—Ed.]

Producing and Selling Honey.—3—R. Grinsell, (19–43), Baden,o+ Mo., on Jan. 22, 1886, writes:

In the fall of 1884 I had 50 colonies of bees, 10 were rather weak, and the balance were in good condition. I wintered them on the summer stands, having lost very heavily the year previous by cellar-wintering. In the spring of 1885 I had 17 good colonies and 2 weak ones to start with, and about 400 empty combs. I worked 13 colonies for extracted honey, and secured 1,000 pounds of honey, one-half clover and the balance light-colored fall honey. I considered that doing well for a farmer bee-keeper. I worked these colonies *a la* Dadant; had only 3 swarms, and those I hived in 10-frame Simplicity hives, 3 deep, with empty frames in each. In working for comb honey I use the Heddon plan—an 8-frame hive with cases of sections 1½ inches wide with no separators. I think that Dadant & Son have the secret of producing extracted honey, but what I am looking for is the secret of selling it. I sold all of my clover honey at a good price, but I sold a 500-pound barrel of fall honey for 5½ cents per pound. How does that compare with the cost of production? In St. Louis to-day I can buy 10 tons of extracted honey at 5 cents per pound. If bee-keepers do not learn to sell their extracted honey at home, their days are numbered. I put 43 colonies into the cellar last fall. The temperature in the cellar is from 38° to 45°. They are doing well.

Bees in Splendid Condition.—Henry W. Haag, Pettit,⊸ Ind., on Feb. 18, 1886, says:

My bees are in splendid condition. To day I took them from the cellar for a flight after 77 days' confinement. I examined one of the weakest colonies, and to my surprise I found brood in all stages of development. I have 12 colonies, and one 3-frame nucleus, which is also in fine condition. I have been wintering my bees in a cellar where the mercury was between 40° and almost at freezing point.

Large Hives, etc.—8—Fayette Lee, (64–124), Cokato,⊙ Minn., on Feb. 23, 1886, writes:

The best hive for any bee-keeper who does not want to feed his bees in the fall, is a 10-frame Langstroth hive, the first story for extracting, or 2 cases for comb honey. Mr. Chas. Dadant is right in regard to large hives, for in them we always get enough honey in the brood-chamber to winter the bees on if we manage rightly, and every comb is filled. Capped honey is the cheapest food for winter. Any hive that will not hold honey enough (say 20 pounds) besides what combs the brood covers, is a poor hive for beginners. Bees will store just as much honey in the upper story if there is 30 pounds in the brood-chamber, after the 30 pounds is put there. I think that some one said that bees would not eat pollen if the temperature was right in the cellar. The temperature of my cellar has been from 40° to 45° all winter, and the bees do eat pollen. I still think that dampness is the cause of bee-diarrhea, and I am not alone in this belief. My bees are all right yet, with only two pailfuls of dead bees on the cellar floor.

Good Results.—Joseph Beath, Corning,♀ Iowa, on Feb. 16, 1886, writes thus:

I have always supposed that we had hardly an average country here for bees, but the following dated Feb. 1, 1886, appeared in a local paper of Feb. 4: "I started last spring with 20 colonies of bees, and I increased them to 89, obtained over 2,000 pounds of comb honey, and sold $365 worth of bees and honey. I have 50 colonies in the cellar, and they have from 30 to 80 pounds of honey each.—S. T. Dagget." I had a conversation with Mr. Dagget, and he said that the increase was all obtained by natural swarming, and he used only 2½ pounds of foundation for both the brood-nest and sections of each hive. If we take the whole 89 colonies and suppose them to equal the 50 (and Mr. D. said that his last swarm gathered 35 pounds, which was the lightest of any after allowing 6 pounds for the bees), we have 344¾ pounds of comb honey for each colony, spring count, and 3 9-20 swarms. What I would like to know is this: Have we the "boss" bee-pasturage in the world, or the "boss" bee-keeper? or what? If the above is true, it must have been all gathered in 1885, for his bees were starving in the spring, and he had to feed them. I should like to know the nearest to this that has ever been reported and well authenticated. After the honey harvest his hives contained from 35 to 104 pounds each. My own report is this: Eleven colonies in the spring of 1885, 23 in the fall, and 1,500 pounds of extracted honey, with a fair supply left for the bees to winter on; also 4 swarms that absconded. I wish that some of the prominent correspondents of the BEE JOURNAL would tell me the best way to fasten the wire into foundation without a press. I wire my frames and then press the wire into the foundation by running a small wooden wheel over it, but last fall I had considerable to fall down when the honey was coming in fast.

Bees and Fixtures Burned.—James Nipe, Spring Prairie,⊸ Wis., on Feb. 20, 1886, writes:

My house took fire on the afternoon of Feb. 16, and was burned with a large portion of its contents, including 163 colonies of bees that were in the cellar with about $100 worth of bee-fixtures.

A Diseased Colony.—S. J. Youngman, Cato,⊙ Mich., writes:

Having examined my bees to-day, I find them very quiet, only one colony showing any signs of diarrhea. They have been confined 55 days. The cellar is dug in heavy clay ground. I was obliged to drain it about 200 feet, and about 4 feet in depth; the water has been constantly flowing in the drain. The walls of the cellar are 18 inches thick, built of stone; then one corner of the cellar was partitioned off, filling in all around with 6 inches of dry planer shavings, except overhead which is ceiled with 1-inch boards. When there is a fire above, the temperature is 50° above zero; without the fire, 48° above. There is no upward ventilation in it. Some of the hives have nothing whatever over the frames; on those that have cushions the bees cluster on the outside to some extent, which seems quite refreshing when the temperature is 18° below zero, outside of the cellar. The colony that shows signs of disease occupies a two-story hive, which rests nearer to the ground than any of the others. It has no cover over the frames; the bees can be seen crawling over the frames, and can be reached handily. I would like to have some of the experienced bee-keepers tell me if anything can be done for this colony; for without help they will surely perish before there is any chance of their having a cleansing flight. They could be fed any kind of medicated syrup without any trouble. The bees that get out of the hives fall into the water with which the cellar bottom is covered, and that causes a mildew or mold to form on the bottom, which results in an unpleasant odor. Should this mold and dead bees be removed? It will disturb the bees to some extent.

Feeding Bees Rye Meal.—W. R. F. asks the following questions:

I desire some information on feeding rye meal to bees in the spring, for pollen. Should it be fed dry or mixed with honey? How will the bees find it?

[It should be put on a dish or board in the sun a few rods from the hives where the bees will generally find it; if they do not, a small piece of honey placed were the bees will find it, and then taken to the meal and placed on it, will soon cause large numbers of bees to work on it and the meal too.—ED.]

Bee-Keeping in Utah.—John Dunn, Toole,+○ Utah, on Feb. 16, 1886, says:

This has been an open winter here; bees have been out a great deal, and if the weather continues long as it has been since Jan. 1, there will be some brood in the hives, and perhaps some of the colonies are breeding now. Last year we had a good flow of honey, although I had not the time to take it all out last fall; but I find that there will not be any lost, as the present winter has been such that the bees required more honey. I have just left my bees on the summer stands, and have not put any extra covering over them, and I think they will come out just as well as those that have housed them. We sometimes have a fine winter until March, and then sometimes we have bad weather until to May, and it is then that our loss is great; for the bees are nearly all breeding before that time, and I have seen the brood frozen in the combs; but it is to be hoped that it will not be so this year.

Illinois State Convention.—Mrs. L. Harrison, Peoria,⊙ Ills., on Feb. 15, 1886, writes thus:

In compliance with the suggestion of Mr. Cutting, President of the North American Bee-Keepers' Society, and acting in the capacity of Vice-President for Illinois, I wrote to Charles F. Mills, Secretary of the State Board of Agriculture. I would like to have the opinion of bee-keepers of this State, as to the propriety of calling a convention at Springfield next winter, as suggested by Mr. Mills. Here is his letter:

"There will be little, if any change in the premiums for bees, honey, etc., this year. If you wish to make any suggestions as to a new classification in this Department another year, the Board will be pleased to receive them, and aid the bee-keepers of the State in any way in their power. So little interest has been manifested at the Fairs, that the Board has had no encouragement to offer more than they do. It is very desirable that an Illinois Bee-Keepers' Association should be organized, and if you will call a meeting of those engaged in that industry, the meeting to take place in Springfield, the writer will do all in his power to assist you in its organization."

Sharp Hits and Truth.—Franklin P. Stiles, Haverhill,♂ Mass., on Feb. 22, 1886, says:

Sharp hits and naked truths are enjoyed by all, and the "chips" from such "hewing" should have unobstructed right of way; but does "history making" require that chip *dirt* shall be *thrown* in the face of the entire fraternity? What think you?

[Cheerfully we reply that "dirt-throwing" in controversies always indicates a lack of argument, but we discover no "dirt" in the article evidently referred to. Our correspondents must take due notice that whenever we discover any but *kind* criticisms (which are always valuable) we shall let the subject rest until all are content to be good-natured in the controversy.—ED.]

Bees Wintering Finely.—Wm. H. Miller, Berrien Springs,♀ Mich., on Feb. 20, 1886, writes:

I lost 67 colonies last winter, being all but one that I had the fall previous, and the one left was very weak. In the spring I bought 2 colonies and worked them for increase, but only by natural swarming. I lost one good colony, and I now have 16, which I think are wintering finely, as they were all right last week. I hope that the coming season will be as good as the last.

Report for 1885, etc.—F. A. Gibson, Racine,⊸ Wis., on Feb. 23, 1886, writes:

My bees did very well the past season. I obtained 2,000 pounds of comb honey, and 2,000 pounds of extracted honey, and have sold all of it in the home market, the comb honey from 16 to 20 cents, and the extracted from 12 to 15 cents per pound; and the bees have had plenty to winter on. I have 89 colonies packed in my bee-cellar, that I put in on Nov. 20, 1885. They have been very quiet all winter. The temperature has been 40°. My hives are reversible. I keep no bottom-boards on them through the winter, but put them on the top—the only true way to winter bees safely, I think. I have had bees for 25 or 30 years, and one of my chief hobbies has been to winter bees safely, and I feel satisfied that I have finally succeeded in finding the true way. My cellar has no ventilation, only when I visit my bees, and that is every day. I look at them with a light, and it does not disturb them at all. They have consumed only 2 pounds per colony, and only a few dead bees can be found on the cellar bottom. They have had no flight since I put them in. I prevented them from swarming last season.

Cleansing Foul-Broody Hives and Combs.—N. H. Ward, Winchester,○+ Ind., on Feb. 22, 1886, says:

For cleansing foul-broody hives and combs I use lye made from wood ashes; close the entrance of the hive, put in the lye, and with a stiff broom give it a good scouring. If you wish to see how nicely the hive will be cleansed, try it. To clean foul-broody combs, take a sharp knife with a rough edge, and shave off the cappings, have a vessel of lye large enough to take in a frame and dip it in until all the cells are filled; then throw the lye out of the cells, and pour cold water upon the combs until they are well washed. You can then place them in the hive, and the bees will accept them and go to work on them.

Good Increase, etc.—Moses Bailey, Winterset,♀ Iowa, on Feb. 18, 1886, writes:

On May 1, 1885, I had 4 colonies of bees left—1 good colony, 1 of medium strength, and 2 quite weak, the 4 making not more than one strong enough for surplus honey gathering. The strongest one had the most bee-bread, probably as much as the other 3, if not more; they also had one frame of very good honey close to them, which they used from liberally. I increased them to 47 colonies, and about 35 of them had plenty of stores to supply them until May 1. The balance were quite short of stores, and several of them may starve. I took about 200 pounds of honey, three-fourths of it being extracted. Two starved colonies came to my apiary in the latter part of June, which were fixed up, and they went to work finely. So far as I know my bees are wintering finely.

My Experience with Bees.—H. J. Smith, Burlington,○↘ Wis., on Feb. 16, says:

On Nov. 16, 1884, I put 100 colonies of bees into the cellar. Twelve of them were lost in the cellar, 3 starved, 9 died with diarrhea, and a great many more were affected with the disease, so that when I put them out in the spring of 1885, they dwindled badly. The spring was so cold and wet that when they left the hives they chilled before they could return again; that weakened them so that I had to keep on doubling them up until the honey season came, when I had only 60 colonies left, and weak ones at that, to commence the season with. These I increased to 94 colonies, and obtained 2,000 pounds of honey, 300 pounds of it being comb honey, and the balance extracted. We had hardly any fall honey, and so the bees were left rather light in stores, thus causing much feeding. Last fall I put 94 colonies into the cellar on Dec. 16 and 17, and they are doing finely so far. There is no disease to be seen yet. I read Mr. J. M. Goodrich's article on page 57, about upward ventilation in wintering, and I think that he is correct. I tried it last winter, and got enough of no upward ventilation. Had I given my bees upward ventilation as I always had done, my loss would not have been nearly as large as it was.

Bees Doing Well.—Wm. Anderson, Sherman,○+ Mo., on Feb. 23, 1886, writes:

After such a hard winter so far my bees are doing very well, except that we had some weather that was moderate enough to cause an uproar in the hives, and not warm enough to allow them to get out; so they voided as best they could, and smeared the hives and combs very much. A great many of the bees are frozen in this locality, as so many bee-men were not expecting a very cold winter, and so failed to put their bees in condition to stand very much cold. My loss will be very little, unless something happens in the future.

How I Winter my Bees.—O. F. Beal, of Mineral Point,○+ Mo., writes:

We have had 3 very cold winters, and it has thinned out the bees considerably here. Last season was a poor one for honey; during white clover season the weather was cold and wet, and in the fall, when we had a little flow of honey, it rained for 5 or 6 days, thereby leaving the bees short for winter stores. I have had so many bees to freeze, that I finally constructed a house that holds 8 colonies (4 below and 4 above). The house is double-walled, with two thicknesses of lumber, and also two thicknesses of building paper—forming a dead-air space of half an inch all about it. The doors are made double also. I had 7 colonies in one house and 6 in the other. Three colonies were very small, not over a quart or two of bees in each, and they froze. These bees were in apartments 15 inches square by 20 inches in depth. I took out the honey-boxes in the top-tier and hung the brood-combs in their place. Had the other 3 colonies been a little larger I think that they would not have frozen. I make a hive after the same pattern for only one colony, but it makes an expensive hive. I believe if we would make better hives we would not lose so many bees. We have had a temperature of 10°, 15° and 20° below zero, at different times this winter. I examined my bees (opened the door to see how they were getting along) when the thermometer was at zero, and there was but very little frost near the door.

Wiring Brood-Frames.—M. P. C., of Newport,♂ Vt., asks the following question:

In wiring brood-frames for the purpose of putting in comb foundation, what would be the objection to having the wire run horizontally instead of perpendicularly, the usual way, thus lessening the labor of wiring?

[Foundation warps from two causes—expansion and gravity. Vertical wires avoid the latter cause, and in any case the closer together the wires are placed, the less liability to warping from expansion. Many have tried both ways, and a large majority prefer vertical wiring—"the usual way," as you say.—JAMES HEDDON.]

Condition of Bees in Kentucky, etc.—G. W. Demaree, Christiansburg,♂ Ky., on Feb. 20, 1886, writes:

I was very much surprised, as well as very sorry, to see the discouraging report of my good friend, Rev. L. Johnson. His location is less than 50 miles north of mine, and my losses are not serious at this date. Two or three good colonies, and some weak nuclei perished, being unable to reach their stores on account of continued low temperature. My apiary is in better condition now than it was last winter at this time. I have not heard from all the bees around here, but I am satisfied that the losses will be less than that of last winter, and less than that of 1881. Allow me to say that the old AMERICAN BEE JOURNAL leads all bee-periodicals, in my estimation. I admire it the more because it treats bee-culture solely as a business industry. Success to it.

The Honey Trade.—Jerome Twichell, Kansas City,+○ Mo., writes:

Having sold my interest in the firm of Clemons, Cloon & Co., it is with regret that I announce my retirement from the honey business for the present. It is now five years since I commenced handling honey in this city, and from a few thousand pounds sold only during the fall and winter season, I have seen the trade grow to nearly a quarter of a million pounds yearly, and sold during every month from January to December. But my alliterative hobby, "Honey, health and happiness," has made me an enthusiast on this subject, and I presume it will be impossible for me long to remain out of the business. I must acknowledge my heartfelt gratitude for the many courtesies received from bee-keepers, and my continued interest in their welfare and success, and should I again become associated with them in a business way, I hope to meet the same cheerful co-operation that I have had in the past.

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

Golden Rules for successful advertising, are these : 1. Attractive display. 2. Salient points clearly stated. 3. Repetition. Don't spend all your money in one insertion. 4. Choice of the Paper which reaches the people you want to reach. *These rules never fail.*

◆

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

A Good Record.—In the Seed Catalogue of Jas. J. H. Gregory, of Marblehead, Mass., page 10, is found the following extract from a letter of D. S. Lyon, Solsville, N. Y.: "This makes twenty-one years we have used your seed and always to our complete satisfaction." In our advertising columns Mr. Gregory offers to send his catalogue of such seed as this, free to all mankind.

◆

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

◆

☞ We have received a copy of Green's New Catalogue and Fruit Guide. It contains more information on fruit culture than any other published. It is a complete guide for growing all kinds of fruits. Send for it and for a sample copy of that sprightly paper, GREEN'S FRUIT GROWER, illustrated, edited by Chas. A. Green. Send your address on a postal card for Catalogue and paper, both free. Address, GREEN'S NURSERY CO., Box 592, Rochester, N. Y.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Mar. 1, 1886. }

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY.—Sales have been quite good this month for best grades of comb honey, some bringing 16c. per pound when in perfect order. There is a light supply here, and now is a favorable time to forward shipments. Extracted honey brings 6@8c.

BEESWAX.—25@26c. per lb.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We note an improvement of sales of honey the past week, but prices continue to rule low. We quote as follows : Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows :—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is no speculation whatever in the market, and the demand is slow for extracted honey from manufacturers, while it is fair for honey in glass jars, for table use. Demand for comb honey is slow and the market is well supplied with all kinds. Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—The home demand is good, while arrivals are slow. We pay 25@27c. for good yellow to choice.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holliday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

BEESWAX.—Very scarce at 22@25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are improving and we have a good trade in comb, although prices are not as firm, owing to good prospects in California for a large crop having reduced their prices about 2 cts. We quote as follows : Choice comb in 1-lb. sections, 16c.; fair to dark, 12@14c.; in 2-lb. sections, 12@14 cents. Extracted is dull and slow. Dark brings 3 1-2 to 4c.; white, 6@7c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—The sale for honey for the past month has been as light as we have ever known it, and prices are weak. One-pound, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The market is very dull. We quote as follows: White and extra white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 23@25c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is very dull. Best white in 1-lb. sections, 14c. There is considerable in commission houses and prices are liable to be lower.

BEESWAX.—It is in good demand at 23@25c.

M. H. HUNT., Bell Branch, Mich.

◆

The Great Marblehead Seedsman.—For 30 years Jas. J. H. Gregory, of Marblehead, Mass., has been distributing his Seed all over the United States until his name has become a household word in the house of nearly every farmer, and his Seeds have established for themselves an international reputation. The value of a crop of any kind is always determind by the value of the Seeds that are sown. Gregory's Seeds never fail, therefore the 30 years of successful business. Look up his advertisement in our columns of this week.

Convention Notices.

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m. M. E. DARBY, *Sec.*

☞ The Southern Wis. Bee-Keepers' Association will hold its 3rd. annual meeting at the court-house in Janesville, Wis., on March 9, 1886, at 10 a.m. All interested are invited. JOHN C. LYNCH, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The next meeting of the Patsalaga Bee-Keepers' Association will be held at Arcadia, Ala., on March 20, 1886. M. G. RUSHTON, *Sec.*

◆

Wire Nails have advanced in price, as will be seen by quotations on page 143, last column.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

Advertisements.

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail ; nailed and also in the flat.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

DUNHAM AND VANDERVORT FOUNDATION.

WE have a large stock of choice yellow beeswax, and can furnish Dunham comb foundation for brood-comb, cut to any size for 42c. per lb. Extra thin Vandervort foundation, 48c. per lb. We guarantee our foundation to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20 cts. per lb. for sections.

F. W. HOLMES,
9Dtf COOPERSVILLE, Ottawa Co., MICH.

1886. ITALIAN QUEENS. 1886.

FROM APRIL UNTIL OCTOBER.

UNTESTED, $1.00, per Dozen $8.00. Reared from Imported Mothers. Money refunded if not furnished promptly. Address,

WALTER McWILLIAMS,
9D6t GRIFFIN, GEORGIA.

FOR SALE.

APIARY 120 ft. long, 50 colonies arranged for comb honey—Simplicity style. Dwelling-house new, barn, poultry-houses, 30 acres arable land, board and wire fence, and 50 acres woodland ; on the hills 1 mile from centre of Yazoo City, Miss. There are 2 acres of strawberries and about 600 young fruit trees (200 bearing), springs of running water, &c. Good fruit and bee country Farm and Apiary at the low price of $2,500—one-half cash, balance in 1 year. If you want a bargain, at once address, "WIEDWOOD PLACE,"
9A2t YAZOO CITY, MISS.

MY 650 Colonies of bees are more than I can well handle, so I well sell for spring delivery 100 full colonies, $5.00 each for hybrids and $6.00 for pure Italians. Discount on larger numbers. I will also sell a few colonies of Caucasian bees, which breed I imported from the Caucasus Mountains, Asia, in 1880, and have proved to me of great value. Address,

JULIUS HOFFMAN,
CANAJOHARIE, Montg. Co., N .Y.
Formerly Fort Plain, N. Y. 9A3t

100 COLONIES

OF

ORANGE-COLORED ITALIANS

AND

WHITE-BANDED ALBINO BEES

FOR SALE.

THOSE in want of Bees, Queens, or Apiarian Supplies will do well to send for my 26th Annual Price-List before purchasing. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
COLERAINE, MASS.

N.B.—The best testimonial I can give, is that my trade has more than doubled in the past 3 years.
7Dtf

1869. UP WITH THE TIMES. 1886

Armstrong's Perfection

CROWN HIVE.

The brood-frames, honey-rack, and section-boxes are all **Reversible.**

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.

Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.

1886. ALLEY'S 1886.

Combined Drone and Queen Trap.

A perfect non-swarming arrangement. Send and get them by the quantity, in the flat, and sell to your bee-keeping friends. Every bee-keeper will purchase one or more who examines them. Send for wholesale prices, Circulars free.

HENRY ALLEY & CO.,
51Dtf, Wenham, Essex Co., Mass.

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS of the **BRISTOL Bee-Hive,** the Standard Hive of Vermont, **Section Honey-Boxes,** all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers, Shipping Crates,** Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for illustrated Catalogue and Price-List. 46D12t

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Bee-Hives and Bee-Supplies,

QUEENS AND NUCLEI.

WE are now ready to fill all orders promptly, at low prices, and guarantee our goods. Send for Price-List free.

B. J. MILLER & CO.,
2D8t NAPPANEE, IND.

BEE HIVES,

One-piece Sections, Section-Cases, Frames, &c., of superior workmanship.

SMITH & GOODELL,

Manufacturers and dealers in Apiarian Supplies and Barrel Churns. Send for price-list.

Rock Falls, Whiteside Co., Ills.
51D8t.

THE VICTOR HIVE

IS pronounced by competent apiarists to be the Best Hive for comb honey. It is operated on a new principle, the passage-ways being continuous through perforated zinc to the sections. Our dovetailed White Poplar Sections, with or without side passages, cannot be excelled in accuracy or smoothness. They are as nearly perfect as can be made. Sample of the new sections for 2 one-cent stamps. Catalogue on application.

Address, **DR. G. L. TINKER,**
Dtf NEW PHILADELPHIA, OHIO.

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.,** a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,

J. P. H. BROWN.
7D10t AUGUSTA, GEORGIA.

BEE-HIVES, SECTIONS,

Foundation & Apiarian Supplies.

Having a large stock of sections on hand we will fill orders in Feb. at the following prices:

4¼x4¼, in lots of 500 to 4,000..(per 1,000), $5.00
" " 5,000 " 4.75
" " 8,000 " 4.50
" " 12,000 " 4.00

4½x4½. at same prices. All V-grooved.

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices.

For description and prices of the **SUCCESS HIVE,** send for Price-List. Estimates given on all other Hives.

QUEENS AND BEES FOR 1886.

We make a specialty of rearing the **ALBINO QUEENS AND BEES.** Price-List free.

S. VALENTINE & SON, Hagerstown, Md.
44Ctf

Italian Bees and Queens.

Having again located at Nappanee I will be better prepared than ever to furnish **BEES AND QUEENS,** the coming season, to my friends and customers, as I have a large Apiary of Syrian Bees in the South, and one of Pure Italians here to draw from. Send for Price-List.

Address, **I. R. GOOD,**
5C2t NAPPANEE, IND.

Carp

The National Journal of Carp-Culture,
—ESTABLISHED IN 1885.—
(8-Page Monthly, Illustrated, 50 cents a year.)

The only Journal in the United States devoted to the interests of Carp-Culture. Sample free.

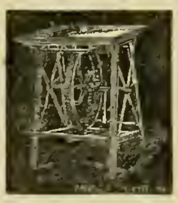
Address, **L. B. LOGAN,**
2C6t **Akron, Ohio.**

WEBER'S MAGAZINE
OF
HUMAN CULTURE

Devoted to Physical, Mental, Moral, and General Self-Improvement, will be sent for the next **THREE MONTHS FREE** to any one who says where he saw this, and sends us his address, together with 10 cents to pay postage, etc. Remember that this chance is not open long and should be accepted at once. We have secured a number of the most able contributors who will supply our colums during 1886 with choice articles upon those all-important subjects. It is worth its weight in gold to everybody. Subscription price is only $1.00 per year. Agents wanted everywhere. Address,

M. S. WEBER, Pub.,
1C6t FARMERSVILLE, PA.

BARNES' FOOT-POWER MACHINERY.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 484 Ruby St., Rockford, Ill.

HEAD-QUARTERS IN THE SOUTH

For the manufacture of

Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.

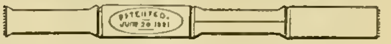
5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

BROOD-FRAMES.—C. W. Dayton, Bradford, Iowa, will furnish first-class brood-frames of any size, at $1.00 per 100, ready to nail; and will take honey and beeswax in payment for the same.
7Dtf

SECTIONS CHEAPER THAN EVER.

THE "BOSS" ONE-PIECE

SECTIONS.



Patented June 28, 1881.

Bee-keepers will find it to their interest to send for our Price-List, just issued, before they order their sections for the season of 1886. We have our machinery in tip-top order, and can turn out more sections per hour than any other manufacturers in the United States; therefore we can fill orders on very short notice.

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., Jan. 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

Good News for Dixie!

SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. *Price List Free.*

J. M. JENKINS,
8A4t **Wetumpka, Ala.**

SEND FOR IT.

We have just issued a new **Circular** that will interest any bee-keeper. Send your name on a postal card for it.

Cash paid for Beeswax.

A. B. HOWE,
8A4t COUNCIL BLUFFS, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

SEND 10 CENTS to Green's Nursery Co., Rochester, N. Y., and get 3 copies of **GREEN'S FRUIT GROWER** and our 100-page **FRUIT GUIDE**—Illustrated with 5 COLORED PLATES. **How to Propagate and GROW FRUIT** is a new book of 160 pages, 75 illustrations and colored plate.—" It has saved me $50." R.L.F. Price, 50 cts.
9A6t

1886. ITALIAN QUEENS. 1886.

6 Warranted Queens for $5.

Write for circular, No circulars sent this year unless called for. **J. T. WILSON,**
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Syr. or Cypr. Q'n.	5.00	5.00	5.00	5.00	4.50	4.50	4.50
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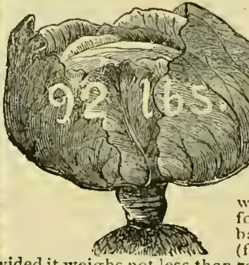

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We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
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NOTICE.—For $3.00 I will mail direct, Frank Cheshire's great scientific work now publishing in parts, "Bees and Bee-Keeping."—Arthur Todd,—Dadant Foundation Depot—Germantown, Pa.
6A4t

BEES, NUCLEI AND QUEENS.

AFTER June 1st, 1-frame Nuclei, with untested queen, $1.50; with tested queen, $2.50. Two-frame Nuclei, with untested queen, $2.00; with tested queen, $3.00. Queens from 75 cents to $3.50. For more frames in nuclei, add 50 cts. for each extra frame, and 50 cts. extra if with selected queen. These prices are for Italian or Carniolan queens, and by the dozen; for less, add 10 per ct. Write for price-list.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. March 10, 1886. No. 10.

The Australian Bee-Keepers' Journal is the name of a new bee-paper edited by R. L. J. Ellery and J. H. Kitchen, Melbourne, Australia. No. 1 is on our desk; it contains 16 pages, and presents a neat appearance.

◆

"Flowers that Bloom in the Spring."—A bouquet of blooming flowers from Mr. J. W. Winder, of Louisiana, is on our desk. Among them white clover with stems 12 inches long; several blossoms from Cuba, gathered there on Jan. 26; and several others from Louisiana, gathered on the 1st inst. While everything is frozen up solid here at the North, it is refreshing to think that our Southern brethren are enjoying "the flowers that bloom in the spring." Truly, this is a vast country.

◆

The American Bee Journal is regularly sent to almost every civilized country in the world. It has regular subscribers in England, Ireland, Scotland, Wales, France, Italy, Austria, Germany, Sweden, Norway, Russia, Asia, Africa, Australia, New Zealand, South America, Mexico, Cuba, and all the Provinces of the Dominion of Canada, as well as in every State and Territory of the United States. Advertisers should note this fact when reaching out for business. The AMERICAN BEE JOURNAL offers them inducements which cannot be obtained elsewhere.

◆

Wm. Dyer, of Hastings, Minn., has sent a reversible-frame attachment to our Museum. It consists of a piece of wire of the length of the side-bar of a frame, with each end twisted into a ring, but in opposite directions from each other. The wire is fastened to the centre of the side-bar by little staples, and when the frame is reversed the ring that was under the bottom-bar turns out to form the projection to hang the frame; the one motion turning the projecting end out carries the other under the bottom-bar. It can be made for and attached to any frame in use, by simply cutting off the end-bar, and without disturbing the comb.

Schacht & Lemcke, of San Francisco, Calif., have issued their annual market review of the honey and beeswax business of California, from which we extract this:

The honey crop of 1885, like that of the year before, was not a remunerative one for the producer on this Coast. The reason that the expected improvement in prices did not take place, was partly in the general depression of trade, in the low sugar prices, and in the decrease of the foreign and Eastern demand for our honey, in consequence of a full supply there; but particularly we may attribute the low prices ruling since August, 1884, to the circumstance that a large portion of the crop of 1884 was held over by the producer for a raise in case of a short crop in 1885, or a better demand for the article from any cause. Consequently, the quantity put on the market during 1885 was not small, but larger than could be handled without a larger foreign or Eastern demand.

To Europe very little honey has been exported during the last nine months of 1885 (about 2,000 cases), for the reason that supplies on hand there were full too, and in consequence of a new tariff in Germany, raising the duty on honey from 3 to 30 marks per 100 kilos, since July 1, 1885. Sales to Germany, therefore, stopped entirely since that date, and supplies increased in England, in consequence of the heavy arrivals in the first six months of the past year, and end of 1884. The low prices resulting from these causes have, however, increased a good deal the consumption of this article, both here and abroad.

The supply on the market and in the hands of producers now is not large, particularly of the better grades of liquid honey and comb honey, which are getting scarce; for which reason prices for choice extracted honey and comb honey, the crop of which was especially short in 1885, are a good deal higher than at this time of the previous year.

The estimated quantity in first hands is about 5,500 cases of extracted honey, and 1,200 cases of comb honey; against about 15,000 cases of extracted honey, and 5,000 cases of comb honey, at the close of 1884.

During the last six years, the quantity of honey arriving in this city has been reported as follows: In 1880—3,000,000 lbs. In 1881—1,200,000 lbs. In 1882—1,500,000 lbs. In 1883—1,400,000 lbs. In 1884—3,600,000 lbs. In 1885—2,000,000 lbs.

Up to July 1, 1885, we received about 1,200,000 pounds of honey, and since then the balance of about 800,000 pounds; showing that most of the honey received during the past year was honey of the crop of 1884. Even among the 800,000 pounds received since July 1, 1885, was a good deal of old honey, and we may therefore safely say that if all, or nearly all, the honey of 1884 would have been consumed, sold or exported before the new crop of 1885 came into the markets, we should have had a small supply on hand, and no doubt much better prices during the last season. We estimate the crop of California for 1885 at about 1,250,000 pounds, against nearly 8 times that amount in 1884.

The whole honey crop in the United States for the past year is estimated at about 26,000,000 pounds of honey, and the States of New York, Tennessee, Ohio, North Carolina, Pennsylvania, Kentucky, Illinois and Iowa were the leaders in the honey-producing States—producing, each of them, more than California in 1885; for which reason, prices in the Atlantic States did not encourage shipments from here.

Comb honey has improved a good deal in prices, in consequence of the small yield; and we may mention that a much greater demand in the East, with better prices, could be obtained, if our apiarists would use one-pound sections instead of the two-pound sections. In the East the prices are about two cents higher for comb honey in one-pound sections, and the demand is better for these packages than for California honey in two-pound sections.

The prospects for better prices are not very bright for the next season, especially as it now promises to be a good crop for 1886; but values are now so low for extracted honey that they can hardly go lower; and we even may expect higher prices, should we have a good Eastern and foreign demand, and a general improvement in the trade, which we trust will be the case.

To Double the Postage on fourth-class matter (which includes bees and all kinds of bee-keepers' supplies), the Hon. James F. Wilson, of Iowa, has introduced a bill in Congress. We have written to our Congressman to use his influence to defeat the measure, and he has replied assuring us of his willingness to do so. Prof. Cook says:

"The postage on fourth-class matter is now 16 cents per pound; before 1872 it was only 8 cents per pound; in Canada it is 4 cents now, I think. A Canadian bee-keeper can send a pound of queens or bees to any place in Canada or the United States for 4 cents, while we now pay 16 cents, and possibly may have to pay 32 cents. This matter deserves the immediate attention of all bee-keepers. I have written to our Congressmen, and would urge all others do the the same. Few, except the seed-men, would feel this oppression more than bee-keepers.

The proposed increase would make the rate the same as letter postage, and would benefit only the express companies. The Postoffice Department would lose the business, and hence would not be benefited. Every one buying or selling bee-keepers' supplies should *immediately* write to Congressmen to use their influence to defeat the measure. If any change is made, it should be *decreased* instead of increased!

◆

Hints concerning Bee-Keeping for March.—The experience of many bee-keepers, not all novices, is that while they can get their bees through the winter well, the early spring is the most trying time. The life of the worker-bee is short at best, and the great proportion of those that go into winter quarters die before the season is half over. New brood must be reared to maintain the strength of the colonies. It is often fatal to success to start colonies at work rearing brood too soon, which is done when they are placed too early upon the stands before the weather remains continuously propitious. It is better to wait. Colonies coming through the winter very strong may be trusted out earlier than weakly ones. Warm weather will excite the bees to activity; if this occurs unusually early, the colonies should be kept as quiet as possible. When the red buds of the soft maple put forth, the bees, as a rule, may be safely released from their imprisonment. Queens are liable to disease and death, and it happens that sometimes a colony is without a queen. In such a case it may well be united with a weak one that has a queen if both, after close examination, prove healthy. If honey is exhausted, feed; and it is well to place fine, unbolted rye flour where it is accessible to the bees. They will use it in place of pollen, if few flowers are open or the weather rough.—*American Agriculturist for March.*

◆

New Price-Lists have been received from the following persons:

J. D. Goodrich, East Hardwick, Vt.—2 pages—Bee-Keepers' Supplies.

Iowa Seed Company, Des Moines, Iowa.—16 pages—Seeds.

Andrew Banks, Reisterstown, Md.—48 pages—Chatsworth Herd of Jersey Cattle.

T. L. Von Dorn, Omaha, Nebr.—6 pages—Apiarian Supplies.

Joseph E. Shaver, North River, Va.—1 page—Bee-Keepers' Supplies. [By an oversight this address was given as Pa. instead of Va., in a recent issue.—ED.]

J. A. Everitt & Co., Watsontown, Pa.—50 pages—Seeds.

Oliver Foster, Mt. Vernon, Iowa—7 pages—Italian Bees and Queens.

J. W. Clark, Clarksburg, Mo.—16 pages—Apiarian Supplies and Bee-Keepers' Diary.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Getting Ready for the Honey-Flow.

Query, No. 210.—In my locality, bees begin to work with the advent of tag-alder and skunk-cabbage, and we have almost every species of honey-producing plants, shrubs and trees indigenous to the temperate zone, especially black and red raspberries, white clover, basswood, willow-herb, buckwheat, goldenrod, and a profusion of fall honey bloom. Our climate is cold and changeable for the latitude, and more or less of the above fail each year to secrete honey. I want to know when we should have our bees ready to receive the honey-flow, and what particular management including brood-space of the hive will produce the best results, taking the season through. What would likely be the best shape to take the surplus honey in, for profit, comb or extracted ?—A. G., Pa.

I think that the safest guide is for every bee-keeper to be the judge of his own locality.—H. R. BOARDMAN.

1. The way you describe it yours is a paradise for bees, so far as a profusion of flowers is concerned. Get the bees strong as soon as possible, and give the queens all the room for breeding that they can utilize. 2. It will depend on your market. Produce both kinds, but be sure and push extracted honey on your home market. It will pay you best by-and-by.—G. W. DEMAREE.

In order to be fully successful, one must know the flora of his locality; when it begins to yield honey, and the duration of yield—then have the bees ready at all times to take care of it. This is the only rule that can be given, as the time will vary in different localities, and sometimes in different seasons in the same locality. " Eternal vigilance is the price of a big crop of honey."—J. E. POND, JR.

From the description I should judge there is no time when there may not be a honey-flow, consequently the bees can hardly be ready any too soon. If there is a continuous yield, the bees will probably get themselves ready; but if there should be any considerable interim, it may be well to feed. The other questions would take a large space to answer, and have been gone over pretty thoroughly in bee-books and papers.—C. C. MILLER.

I have arranged surplusage for both comb and extracted honey, on each and all of my hives, for I find it most profitable to take my light honey in combs, and darker (autumn) grades in liquid form. It pays me to go to this extra expense. After you determine the probable time when field-workers are needed, give plenty of room to breed up a large number of bees to be ready to work at that time; after that, when breeding would not result in bees that would be just the right age at the right time, contract the brood apartment, stopping excessive breeding, and crowd the bees into the surplus department in large numbers.—JAMES HEDDON.

Suppressing Second Swarms.

Query, No. 211.—Having made a swarm from a colony, what is the best method to suppress a second swarm from issuing naturally ?—Arthur.

Leave but one queen-cell and give room as needed.—H. D. CUTTING.

Heddon's method of prevention of after-swarms, if carried on carefully and not overdone, is the best.—DADANT & SON.

By occasionally removing a frame of brood and inserting in its place a frame of empty comb or foundation. The remedy is also assisted by using the extractor.—J. P. H. BROWN.

Extract the honey, ventilate the hive well and keep it shaded. Extracting is almost sure. Adding space by giving crates of sections is also an aid, especially if we reverse the combs. The honey is then removed from the frames, which gives the queen room, and swarming is deferred.—A. J. COOK.

If a colony is divided, as soon as it is strong enough, it will probably "swarm." One division does not prevent the bees having their " turn." I should prefer to let the bees swarm once, then prevent after-swarming by the Heddon method.—W. Z. HUTCHINSON.

Influence of Pollen on Honey.

Query, No. 212.—We have cells of honey uncapped for extracting—does the pollen floating in that honey influence its taste or color in any way ?—T.

I think it would.—C. C. MILLER.

It never does anything of the kind here. There is not enough pollen in 10 pounds of white clover honey to load ten bees, or one bee to the pound. Honey gathered from large, open flowers, such as pumpkins, melons, etc., may contain pollen more or less, sufficient to give a distinctive flavor, but there is little of such honey gathered here.—G. W. DEMAREE.

Floating pollen in honey frequently affects its taste. Apple-bloom honey nearly always contains pollen in large quantities, not only injuring the flavor, but it also acts like yeast, fermenting and souring the honey.—H. R. BOARDMAN.

Yes. I have said considerable about diarrhea being caused by the bees necessarily consuming pollen that was floating in their honey. It may be that the principal way it gets into the honey is by soaking up and mixing with it in cells where both are stored together.—JAMES HEDDON.

It will depend wholly upon the quantity. Pollen is found to a greater or less extent in nearly all honey. As a rule, not enough is found to injure the flavor, and when so found it should be saved for early stimulative feeding, as the pollen contained therein will urge on brood-rearing at a time when little if any is found in the field. A very small amount of floating pollen might injure the color, when it could not be detected by taste.—J. E. POND, JR.

Stimulative Feeding.

Query, No. 213.—My bees are in the cellar; the temperature is 48° Fahr. When and how shall I feed them to stimulate breeding ?—Lucas Co., O.

I do not care to have them " breed " until taken from the cellar.—G. M. DOOLITTLE.

When it is warm enough for them to fly every day. You can feed them in the open air if there are no bees near you.—W. Z. HUTCHINSON.

If you *must* stimulate them, slightly break the capped honey nearest the cluster. If in deep frames, break the cells on top. If stores are short, feed liquid food.—H. D. CUTTING.

I have found that they do better when they do not breed, and so I would not stimulate them. I think that a warm cellar and plenty of pollen would be the best stimulants, if one wished for breeding.—A. J. COOK.

We would advise you to leave them alone till you take them out. They will breed a little anyhow, but the stimulation of breeding in confinement will lead to disaster. Feed them after removal from the cellar, and only in mild weather.—DADANT & SON.

Introducing Virgin Queens.

Query, No. 214.—Please give the best method of introducing virgin queens to full colonies of bees. Why are they more difficult to introduce than fertile queens ?—Ioa.

If the virgin queens are " just hatched," they can be introduced by just letting them toddle in among the bees. After they are a few hours old, I cage them in a provisioned cage, and introduce them in the same way that I do fertile queens, watching them until the bees are willing to accept them. Bees have a well grounded prejudice, instinctively of course, against virgin queens of 2 or 3 days old, because they seem to be aware of the fact that a laying queen has a very slim chance for her life when engaged in mortal combat with the keen, active virgin queen. For this reason they keep a jealous eye on her till such time as they despair of relief from queenlessness from any other source.—G. W. DEMAREE.

1. The colony should have been queenless about 24 hours. Run the virgin queen in at the entrance, or any other part of the hive, following her with a light whiff of smoke. Do this as soon as she is hatched. 2. They are not, unless too old; and when the bees would recognize either as a stranger, they seem to favor the best finished job.—JAMES HEDDON.

Any answer to the above, especially the second part, will be largely theoretical. I never introduce virgin queens except as a matter of experiment. I prefer to use ripe cells. In a large apiary this might not be quite convenient, but answers my purpose well. A hopelessly queenless colony will usually accept any queen, if the queen conducts herself as she ought, *i.e.*, calmly and coolly.—J. E. POND, JR.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⸌○ northwest; ○⸍ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Wide Frames with Separators.

16—G. M. DOOLITTLE, (40–95).

For several years there has been quite a cry against wide frames with separators, some even going so far as to predict that they would soon be "things of the past;" but after trying most of the various arrangements which are used to secure honey in sections without them, I am satisfied that there is one at least who will continue to use wide frames and separators, a few years longer at least; for I believe them to be of real value in securing a crop of comb honey in the *most marketable shape.* While speaking regarding this subject perhaps it might be interesting to some to know something of the past, and how wide frames and separators came into general use.

Years ago, when I first commenced keeping bees, I knew of no box for surplus honey smaller than the 6-pound box as then used on the Langstroth hive. I next saw the Alley or 3-pound box, and afterward the Harbison section, none of which pleased me. I then made a box to hold 2½ pounds, and prepared a hive so these could be placed all around the brood-nest, and at the top, but as I must of necessity glass them before the bees filled them, in order to keep the bees from bulging the combs one into the other, it was rather slow progress which I made. In the winter of 1871-72 I visited Mr. N. N. Betsinger, of Marcellus Station, (a place 11 miles from me), and while there he showed me (as I believe) the first wide frames with tin separators that were ever known, which he had invented a short time previous. As soon as I saw them I said that this was just what I had been looking after for some time, and at once adopted them, the use of which gave me the best of satisfaction.

These wide frames were so arranged that they could be used either at the side of the hive or on top, or both, at the pleasure of the operator. Mr. B. never used them on the tiering-up plan that I know of, yet he might have done so without my knowledge of it. In 1874 I made and used several sets on the tiering-up plan, by making the top and bottom piece alike and using a part directly on top of the frames and each other, *a la* Tinker, and a part with bee-space between, *a la* Heddon. After a few years' trial I became satisfied that I could not obtain so much honey by this tiering-up plan as I could by using a single tier on top, in connection with side-boxing as I had first planned, before I ever saw a wide frame; so I threw away all of my open-top wide frames and worked entirely on the plan I have given so many times in the BEE JOURNAL.

Prior to 1876 wide frames had only been used containing a single tier of sections, as both Mr. B. and myself used two wide frames with a bee-space between when we wished them two tiers high at the sides of the hive, neither he nor I ever using a two-story hive at that time. In March, 1876, at the request of Mr. A. I. Root, I sent him a set of wide frames as I used them on the standard Gallup hive. Upon receiving it he wrote as follows: "Yours is the nicest box and case I have ever seen, and is the most complete arrangement for comb honey I have any knowledge of. If the plan of the whole is of your own invention, I would suggest that you get them patented." I wrote him that the wide frames (or cases as we then called them) were the invention of N. N. Betsinger, who had not seen fit to patent them. Soon after this Mr. Root came out with his "broad frames" to be used in a two-story hive, and from these sprang the wide frames as they are generally used at the present time.

This using of two tiers of sections in one wide frame is what has caused apiarists to cry out against them, while if only one tier had been used in a frame and these tiered up, those liking the tiering-up plan would not have tried to substitute any other arrangement for wide frames, it seems to me; for I find them better adapted to the securing of surplus honey than anything else, all things considered, especially as they can be made for any size of sections, and used on any size of hive.

Now about making and using wide frames: Get all the pieces out true and square, after which nail them over a true square form. If you wish to use them on the tiering-up plan, make both top and bottom 5-16 of an inch narrower than the ends; if to be used only one tier high, then have the top the thickness of the tin wider than the sides or ends, for the separator is to be nailed on the ends. After using several kinds of material for separators, I prefer tin to anything else. The nailing on of this tin has much to do with our liking or disliking wide frames, for if nailed on loosely, so it can kink and bulge, the operator will become disgusted with them. Mr. Betsinger used to nail on one end of the separator in its proper place, when by means of a weight and pully attached to the other end of the tin it was drawn tightly when being nailed. Instead of the weight, I used (the first year or so) a hand vise so arranged that I could pry over one end of the wide frame, thus drawing the tin tight when nailing. While thus working, one day, I noticed that in drawing the tin I often sprung the top and bottom of the frame out or in, as the case might be, and from this I soon had a perfect way of putting on tin tightly every time.

I made a form a trifle shorter than the frame was long, outside measure, this form being perfectly true and square, which gave advantage over the vise method, for with that the frame was sometimes drawn out of true. Next I made a block the size of the inside of the case (except a little shorter), and of the same thickness as the ends to the frame, which was tacked to the form. To use it, I sprung or bent the top and bottom bar of the frame a little, thus shortening it, until it went into the form, when I laid on the tin separator, placing a straight edge on top of the tin and a weight on this. I now had the tin just where I wished it with all bulging taken out of it, when it was nailed fast to the wide frame. Upon removing it from the form, the top and bottom sprung back into place again, thus drawing the separator as tight as a drum-head. I have put on separators in this way for the past 10 years, and like it very much.

I have tried all ways of keying these wide frames together, using them in a clamp, etc., all of which I did not like, as I wished a plan that would allow of my using as few or as many wide frames on a hive as I pleased, from 3 up to 12, according to the strength of the colony, for often with the old plans we are obliged to give too much surplus room to start with. At last (about 4 years ago) I accomplished what I was after by procuring some rubber bands about ¾ of an inch wide. These I cut into pieces 3 inches long. To one end I attached a stout string (by means of a slip knot) about 5 inches long, and to the other end one about 18 inches long. The short strings was firmly tied to a nail driven into the end of the board that comes against the outside of the outside wide frame, another being attached to the opposite end of this board in the same way. In each end of the board which goes on the outside of the opposite outside wide frame, is driven a large-headed, steel-wire carpet-tack. This tack is driven in within about 1-32 of an inch of its large head, so that when a string is wound around it a little more than once, it is clamped as securely as if tied. The wide frames are then placed on the hive, 2, 3, 5, 8, or 12, as the colony requires, putting on the outside boards to close all, draw the rubber till a strong tension is made, and wind the string around the tack. In this way the wide frames are held as in a vise, yet they give all the lateral movement required, and can be taken off as one case or separately, tiered-up, inverted, etc.

Borodino, ⊙ N. Y.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Cedar Valley, Iowa, Convention.

The Cedar Valley Bee-Keepers' Association met at La Porte City, Iowa, on Feb. 17, 1886, and was called to order by the President, C. P. Hunt, of Waterloo.

President Hunt read a selection from the State Horticultural report, which was very interesting.

The Secretary then read a very interesting letter from Dr. Jesse Oren, who is now in Florida, concerning the honey-production of that State. The minutes were then read and approved, after which questions were asked and answered as follows:

Do bees freeze? Mr. J. K. Oren thinks that they do not hibernate, and therefore will freeze. Others had different opinions.

Which is most profitable, comb or extracted honey, all things considered? All would rather produce extracted honey if they could get a ready market for it.

What is the best sized shipping-case for one-pound sections? It was thought that 48-pound cases were the best; some preferred glass fronts, and some without.

What is the best material to use in smokers? Some preferred rotten wood, and some used burlap.

Is it best to use whole sheets of foundation in sections? Mr. L. L. Triem thought it best to use whole sheets, while others thought it best to use only a starter.

The evening session was called to order by the President at 7 p.m.

Which is the best to use in the end of section-case next to sections, glass or wood? It was generally thought that wood was best.

How do bees communicate to each other? By sound and scent.

When is the best time, and how is it best to stimulate in the spring? Feed a syrup after fruit-bloom.

Is it better to feed in the hive or out-of-doors for stimulating in the spring? It is best to feed out-of-doors if not too many neighboring bees near by.

Do bees have a place selected to go to before swarming? They do.

What is the best method to introduce virgin queens? Mr. A. J. Norris drops them in front of the hive and lets them run in at the entrance. L. L. Triem and H. E. Hubbard think it best to introduce in a queen-cage.

The Thursday morning session was called to order by the President at 9 a.m.

What is the best method to stop robbing? Mr. Hubbard practices covering the front of the hive with hay or grass, and then sprinkles with water. Some others exchange places with the colony that is doing the robbing.

How many bees ought to be taken out of the cellar at one time? Mr. C. P. Hunt thought it best to take them out all at once. J. K. Oren and H. E. Hubbard practice taking out ¼ or ½ at one time, and at about 3 p.m. on a nice, warm day.

Is it best to shade hives, and if so what is the best shade? Quite a difference of opinion was expressed, but a board laid on top of the hive was thought sufficient.

The afternoon session was called to order by the President at 1 p.m.

It was decided that the President appoint a time as soon as convenient before the State convention meets, for the annual meeting of this Association.

What race of bees is best, all things considered, for general use? Mr. J. K. Oren thinks that the Holy-Land bees are the best, and also thinks that the leather-colored Italians are superior to the light-colored Italians as honey-gatherers; but does not like the "business-end" of light hybrids at all; thinks it most too much business.

The Secretary's report was then read and approved.

How far apart should apiaries be? It was generally thought that four or five miles was sufficiently far apart.

How far should the feeder be from the bee-yard to prevent robbing? Twelve or fifteen rods.

How near to each other should bee-hives be placed in the apiary with success? Not closer than 6 feet.

Is it best to move a swarm to its stand as soon as hived, or let it remain where hived? Move it as soon as hived.

It was decided that it is detrimental to the interests of bee-keepers to use whole sheets of foundation in sections.

The President, Vice-President and Secretary were appointed a committee on programme for the next meeting.

The convention then adjourned.

H. E. HUBBARD, *Sec.*

For the American Bee Journal.

Bee-Keeping in Iowa, etc.

B. F. LITTLE.

The season of 1885 was not as profitable with me in the production of honey as other years. I lost three-fifths of my colonies during the winter and spring of 1884 and 1885, leaving 50 colonies. The white clover flow was very limited, basswood yielded nothing comparatively, and there was no fall flow of honey. I obtained in all about 1,400 pounds of honey, and increased my apiary to 84 colonies by letting them swarm all they would. It is possible that the grasshopper crop may have had something to do with it. The last 3 years the grasshoppers have been on the increase; the honey flow on the decrease. In 1883 my white clover surplus was about 2,200 pounds; in 1884 less than 1,500; and in 1885 less than 1,000.

I am afraid there is some truth in the assertion made by an Iowa bee-keeper, that the winter problem in this northern Iowa climate is the one most of all that needs a solution. Talk about a winter flight! From Dec. 1 to March 25 there has not been one day in 10 years here that bees could fly. I have been here 30 winters, and know for myself. We usually have from 70 to 90 days without even a thaw on the sunny side of a building. My bee-cellar is 7 feet deep, double-walled from half way down up to the top, lathed and plastered sides and overhead, and a building over it 16x26 feet, which is also lathed and plastered, sheeted and sided. It has double cellar doors, and yet the temperature will go down to 34° above zero ordinarily, and as low as 28° when very cold, unless kept up by artificial heat, which I am using this winter.

I am quite sure that the Bee-Keepers' Union can effect much good in the direction of spending some of its money for the purpose of bringing those to justice who are constantly giving publicity to the notorious falsehoods about manufactured and adulterated comb honey.

The marketing of our honey is another of the unsolved problems—one that is of vital importance. I see no excuse for the present low price of honey as reported from the leading cities, only through the imprudence of crowding the honey into the large cities, and leaving country towns without any, thus bringing the whole crop to the price of gorged markets.

Brush Creek, Iowa.

For the American Bee Journal.

My Experiments in Wintering Bees.

JAMES HEDDON.

I had thought that I would not write again upon this subject until next May, but in consideration of the facts that I am experimenting quite extensively, and the subject is a momentous one—one so very intimately connected with our success or failure, its intermediate discussion and report will not be uninteresting.

My Glenwood Apiary, of 150 colonies, all in my 8-frame Langstroth hives, were all worked for extracted honey during the past season. Owing to the unprecedentedly cold August, our late surplus crop was very nearly a failure, consequently these colonies managed for extracted honey, nearly all lacked sufficient stores for winter.

Believing that cane-sugar is a better winter food for bees than honey, and having no trouble in disposing of my honey at 7 to 8 cents per pound, and being able to manufacture pure cane-sugar syrup at a little less than those figures, I fed nearly every colony from 5 to 15 pounds of the syrup, which they added to the stores which they already possessed.

I had no fears of any bee-bread that the combs might contain, as long as the temperature was kept above that point which forces the bees to exertion, in order to be comfortable; and that temperature I determined to maintain.

I had no bee-cellar there, but a house-apiary 12x48 feet, and 7 feet high; the ceiling covered with sawdust, and the walls filled with the same. In this building I partitioned off a room 11x18 feet, where I piled the whole 150 colonies, occupying nearly all the room. The partition is also a filled wall containing tight-fitting doors.

As I live 6 miles from Glenwood I doubted my ability of controlling the temperature of the bee-house. I will describe how I have done it so far. The walls are rather thin, and having no heat to depend upon except that produced by the bees (which is slight when a quiet, healthful condition is maintained), I decided to test the ventilation question, and depend upon tightly-closing the room for the maintenance of a temperature no less than 45° during our coldest weather. That temperature has been maintained during the protracted cold, and although at one time this room was for over three weeks closed as tightly as good carpenter-work and packing could make it, yet (notwithstanding the large number of bees for the size of the room) no uneasiness nor signs of disease have resulted. The bees always have been very quiet.

Although we have had some severe weather, there has been several protracted warm periods during the present winter, and notwithstanding this room has been tightly closed, the temperature has not been above 50°, and the bees have not been uneasy. The entrances to the hives are wide open, but the tops are tightly sealed. I doubt if this same regularity in temperature and quietude would have existed had there been no sugar syrup in the hives (all other conditions being the same,) with natural stores in its place. Bees seem to maintain greater quietude when their stores are of sugar syrup.

I have 300 colonies here in two cellars, and during all the cold periods these cellars have been "hermetically sealed," as it were, and the same apparently healthy condition exists. The few colonies that I have examined are in the much desired "quiescent" state, which Mr. Clarke has chosen to call "hibernation."

Here my experiments are conducted differently. I have quite a number of colonies all wintering upon cane-sugar syrup with no honey or bee-bread in the hives; many more are on all natural stores; besides other experiments that I am making.

While I believe that all my colonies will winter well, past experience compels the belief that those consuming nothing but sugar syrup will void nothing on their first flight, while those consuming honey will void a thin, yellow excrement which the microscope will show to be composed of pollen-grains and water. As I have previously stated, I believe that bees never touch bee-bread when the temperature is kept above that point which induces exertion; but that they do of *necessity* consume pollen if such pollen is floating in the honey which they eat. This much I know: Bees may pass a 5 months' confinement on sugar stores only, and accumulate no fecal matter. I have never seen my bees fly, even after *two* months confinement, upon natural stores, without discharging more or less of these accumulations, the solid substance of which I believe always to be composed of pollen-grains.

Whether or not all our minor conclusions are correct, I am confident that all may now unitedly say that "our great enemy is conquered, and the wintering problem is practically solved." No doubt we have yet more to learn regarding some of the less important laws—a knowledge of which will aid us in accomplishing our purpose in the simplest and cheapest manner—but I no longer doubt that practical success in wintering bees depends upon proper food and temperature.

Dowagiac, ♀ Mich., Feb. 15, 1886.

Oneida County, N. Y., Convention.

A meeting of the Oneida County, N. Y., Bee-Keepers' Association was held at Rome, N. Y., on Feb. 24, 1886. The attendance was large. Secretary O. J. Evans being absent, W. E. Clark, of Oriskany, was appointed Secretary *pro tem.*

Chairman Bacon said that bee-culture was quite a business. It had become an element in the business interests of the country. He said that he had intended preparing a paper on marketing honey, but as that question was made prominent before the late State Convention at Rochester, and as the chairman of that convention was present, he could present the matter much better. He then called on W. E. Clark, of Oriskany.

Mr. Clark said that the subject of marketing honey was the most prominent before the convention. It had been decided to send a committee-man to Thurber's, in New York, where the resources for selling honey are five times as large as any other place in the United States, and see if they would not put a practical honey-man at the head of their department. Honey must be produced so as to be sold cheaper in order that it may compete with other sweets. It should compete with cane-sugar, that it may be more extensively used for table purposes. There seems to be an impression that old women, broken down men, and those who have been unsuccessful in almost every other business can conduct a bee-business. This is all wrong. It is hard work to do it properly, and requires strong men. There are too many middle-men between the producer and the consumer. He had known honey to be bought at 11 cents and sold as high as 30 cents per pound. We must get rid of these middle parties, then honey will be cheaper and more generally used.

At this point Secretary Evans arrived and read the proceedings of the last meeting.

Mr. Bacon said that when he stated at the last meeting that his bees only consumed from 5 to 10 pounds of honey in wintering, it was only for the time that they were shut in—about 120 days.

M. D. Parkhurst, of Boonville, said that he kept his bees in the cellar with the temperature at about 35°, and that they consumed from 18 to 24 pounds of honey. If it was warmer they would be livelier and consume more.

Mr. Clark continued: It is a good idea to dispose of honey at home, by peddling it around. When people come to your place try and sell them some honey. Why, some time ago the tax-gatherer came to my house, and before he went away I had a 10-pound pail of honey sold to him. Honey is at present a drug in the market, on account of hard times. In selling it at home you get accustomed to using it. There is one thing that is injuring the business, and particularly prices, and that is the custom of farmers who produce a little honey, coming in and exchanging it for groceries. They do not get what it is worth, but they establish a price and then it is hard for us to sell our article for its value.

Mr. Smith, of Chittenango, urged the producers to stand by each other and keep prices where they belong.

At the afternoon session the question of frames was taken up. Mr. Smith said that no one could tell what frame was the best to use. Locality is a question to be considered in this connection. He uses a 9x14-inch frame. The question is a broad one, and will bear much study.

Secretary Evans said that the size of the frame for extracting should be in accordance with the size of the sections. We should avoid extremes in the matter of frames.

W. E. Clark said he did not believe that they could agree upon any one size of frame.

The question of comb foundation was brought up and discussed.

Secretary Jones said that too heavy foundation should not be used, as the bees cannot draw it out properly.

Mr. Clark said that sometimes foundation is put in too early. If the foundation is heavy it will not be drawn out. He recommended the thin foundation.

Mr. Warriner said that he had found that the thinner he could use the foundation and retain the side-walls the better.

Mr. Smith said that a yellow foundation could be bleached white in the sun, but it became hardened at the same time.

Mr. Clark said that wax bleached was hard and not satisfactory. Use yellow wax in preference to bleached.

Mr. Smith read an interesting essay on the production of comb honey.

President Bacon suggested that, as one day was too short a time in which to transact the necessary business, subsequent meetings be held for two days.

It was decided that meetings be held semi-annually for two days each, and that the next meeting be held in Utica, N. Y.; all subsequent meetings alternately in Rome and Utica.

A committee of three was appointed to answer such questions at the next meeting that may be submitted in the meantime. The committee is Messrs. Clark, of Oriskany, Evans, of Camroden, and Smith, of Chittenago.

The committee appointed at the last meeting to confer with the

Oneida County Agricultural Society in reference to making exhibits of honey at the County Fair, asked for an extension of time, which was granted.

For the American Bee Journal.

Feeding Sugar---Reversible Hives.

W. Z. HUTCHINSON.

First allow me to thank Mr. Dadant for his frankness as shown on page 75; next, please allow me to explain that those who force the honey into the surplus receptacles by "contracting, reversing, or by using small hives," have no intention of feeding back again to the bees the honey that has been forced into the surplus receptacles, but expect to replace it with the cheaper and safer food, cane-sugar; or, if they find that some particular kind of honey is safe for winter stores, the "contracting, reversing, and small hive" method will enable them to choose this particular kind of stores for winter. This method does not compel us to feed, but enables us to do so if we wish without first extracting the honey from the brood-combs.

Considerable is now being said against the use of sugar for winter stores. The low price of honey has been attributed to this practice. Some have accused it of being the foundation upon which has been built the sensational stories in regard to adulteration; and those who have practiced it have been accused of building up the sugar trade at the expense of the honey market. When our commission merchants quote low prices, I believe they never mention this as a reason—it is always "owing to several carload lots from California," or something of this kind that is given as a reason for low prices. If no more sugar should be used for winter stores, or fed for any purpose, for 20 years, these same stories would live and be repeated. The truth of the matter is, that when small brood-nests are used and the bees given but little more honey than enough to last them until honey can be gathered in the spring, there will be practically none of it left by the time of the commencement of the white clover harvest, which is about the first from which we secure a surplus.

The talk about "building up the sugar market," even if there were any objection to so doing, is all "bosh." The sugar fed to bees is not even a drop in the bucket so far as the sugar market is concerned. That the practice puts more honey upon the market is a more reasonable idea, but it falls upon a deaf ear when told to the man who would have no honey to sell at any price unless he winters his bees; and can only succeed in so doing by feeding them sugar for winter stores. We may argue as long as we please, and bring forth the best of arguments, yet our arguments will be useless, *if* the bee-keepers who now lose their bees during winter learn that they can winter them successfully by substituting sugar for natural stores; and when they come to this decision they will welcome the hive and system that will enable them to bring out the bees in the fall in nearly a starvation condition, and it will only be necessary to put on the feeders and feed, the work being done in a few hours.

THE NEW REVERSIBLE HIVE.

I would like to say a few words in reply to Mr. Alves' questions concerning the new reversible hive, on page 72:

1. There is no more machinery about the Heddon hive than about an ordinary one, except the thumb-screws, and these are fast and seldom used.

2. Yes, it does require exact work in manufacturing, but this is made up many, many times when we once get them right and begin manipulating them.

3. Four dollars is only the price of a single sample hive; they can, of course, be made much cheaper in large quantities. If a high priced implement enables us to dispense with labor to a sufficient extent, it is *profitable.*

4. Mr. Heddon's principle can be used with two shallow Langstroth hives, and the advantage of interchangeableness will be secured, but the advantage of reversing each section is lost; as well as some of the advantages of manipulating hives instead of frames.

Criticisms from Mr. Alves are always valuable, because he appears fair, and willing to accept the truth.

Mr. Demaree, in his article on page 102, claims to have used sectional brood-chambers for some time past; and as proof, refers to his articles in several defunct bee-papers, and also in the AMERICAN BEE JOURNAL. With the exception of the AMERICAN BEE JOURNAL he mentions no pages. Will Mr. D. please state the pages and volumes where he has mentioned using a hive the brood-nest of which is, or can be, divided into sections longitudinally; or, better still, quote some of the passages bearing upon the subject, as many of us may not have files of the papers mentioned. The article on pages 370 and 371 of the AMERICAN BEE JOURNAL, Vol. XIX, shows conclusively that Mr. Demaree used the ordinary Langstroth frame in the brood-chamber, and that the shallow combs were used in the supers only for securing extracted honey. Mr. Heddon does not claim to have originated the idea of "tiering-up" hives, but of "tiering-up" brood-chambers; and although he has no patent upon this, he does claim that, whether "prior" as an inventor of this process or not, he was original in its discovery and use, and the *first* to make it *public*, clothed in practical shape, and presented as a system of management, after testing and finding it good. Mr. D. may have accidentally gotten his queen and brood into one of these shallow supers, or he may have put them there purposely, and is now wintering them there, but it amounts to nothing; as everybody knows that whoever used or did not use a two-story brood-chamber, Mr. Heddon was the first to place the idea before the public. It is now a year since I knew of Mr. Heddon's new hive, and I have used them one season; all this time I have watched closely to see if the same idea was advanced by any one else. I have watched in vain.

Mr. D. says: "When we hive a swarm in the lower story or *brood-department* (?) (italics are mine) of a hive, we call it a 'hive;' when we add another story to it to give the bees more room, we still call it a hive, because it is a hive in sectional parts. Now the mere difference in the depth of the sectional parts can never change an old idea into a new one." Why does Mr. D. apply the term brood-chamber to the lower story? Because it *is* the brood-chamber, and the upper story is not added for brood but for surplus; and the idea of making this brood-chamber in longitudinally sectional parts that can be interchanged at will, *is original with Mr. Heddon, and was first published by him.*

Mr. Demaree attempts to defame the hive by saying the case is simply a shallow box, etc. In so doing he inadvertently praises it. Its "simplicity" is really wonderful, considering how much can be done with it. Mr. Alves is respectfully referred, for an answer to his first query, to paragraph 5 of Mr. Demaree's article.

Mr. Demaree further says: "It is proper to say that the frames are adjusted in the case, so as to leave a shallow bee-space both at the top and bottom of them, and the case will work either side up or down;" and he dismisses this grandest of all the grand features of the hive with, "comment is unnecessary." Perhaps he meant that it would be unwise, for there can be no imaginary question as to the newness of thus arranging frames so as to have the bee-space on either side, or divided between both at will.

When reading the paragraph in regard to the use of thumb-screws, which ends with, "No device is more commonly used than a 'set-screw,'" I could not help exclaiming, "Why didn't he say, Mr. Heddon's hive is made of wood, and no material is more common out of which to make hives?"

Please allow me to relate an incident: Last week, at Adrian, Mich., I had the unexpected pleasure of meeting Dr. A. B. Mason, of Toledo, O. Not having read "Success in Bee-Culture," he did not exactly understand how Mr. Heddon's hive was made, and questioned me concerning it. As one feature after another was explained, his genial face lighted up as a face will only when its owner is hearing pleasant news; and his tongue belied not his face when it said: "Is that so?" "That's it, that's it." "Well, well!" or similar expressions. It was *new* to the Doctor. Now, when a man like Dr. Mason, who reads the bee-papers, attends conventions and fairs, and is a practical, well-posted bee-keeper, learns of the features of this hive with a burst of pleased surprise; when such men as Wm. F. Clarke pronounce it as "revolutionizing," Thos. G. Newman as "new and original;" and when A. I. Root and D. A. Jones consider it patentable, it ill becomes an "independent" writer to apply such terms as "old idea," "common property," "old acquaintance," etc.

Father Langstroth gave us the movable *frame*, and Mr. Heddon now gives us the movable *hive*, *i. e.*, by means of his hive and system of management, we can run our apiaries almost entirely by manipulating hives instead of frames; it is a grand step, and its progress over the land will not be stayed by a few unproven assertions.

Rogersville, ♂ Mich.

For the American Bee Journal.

Selling Extracted Honey.

M. M. BALDRIDGE.

The editor, knowing me to have had considerable experience for a term of years in handling extracted honey as a specialty, and successfully, desires me to answer the following queries:

"Will some one having experience please answer the following questions through the AMERICAN BEE JOURNAL? 1. Do those who practice selling extracted honey in small cans still find a growing demand for it in the same towns in which they formerly sold it? 2. What size packages do they use?—North Freedom, Wis."

1. My experience in selling extracted honey is directly to consumers, and not, under any circumstances, to retailers. When I supply a town, village or city, I visit every family in it with a true sample of the honey that I propose to deliver, for the purpose of securing orders for the quantity desired. In no case do I take an order for less than 5 pounds, nor more than 20 pounds. No family is omitted—no matter how poor nor how rich, nor whether they be white or black—and the price to all is the same under all circumstances. When the orders are secured I then deliver the honey and collect the pay—unless I agree, when the order is taken, to wait for it until a specified date.

As a rule, the first time a town is properly canvassed more honey will be taken than at any one time afterward, for the simple reasons that many will buy who are not lovers of honey, but wish to have some in the house for sickness, or for the novelty of it, or perhaps because their neighbors are buying! No matter how good the quality of your honey may be, there is in every town plenty of people who do not relish the article, and never will. After supplying a town the second time, the sale of honey from year to year will be quite uniform, provided the same is "gilt-edged." I have now in mind one city that I have supplied regularly for the past twelve years, and my sales the past year have been as good and as satisfactory as during any one of those years. The great secret of my success perhaps is that I never sell a poor quality of honey.

2. I use only one size of package, and that is a common 2-quart tin-pail with a loose cover, which holds 5 pounds of thick liquid honey, net weight. When I deliver the honey the consumer can keep the pail or empty it as may be desired. If the pails are emptied and returned to me at the time of delivery, I deduct 10 cents for each pail. I find that most of my customers prefer to empty the pails and keep the honey in glass fruit-jars.

St. Charles, ♂ Ills.

For the American Bee Journal.

Bees as Fertilizers of Flowers.

J. F. LATHAM.

On page 6, Mr. G. M. Doolittle quotes two paragraphs from a paper which he "chanced to pick up," and makes the ideas embodied therein the subjects for the comments contained in his article.

As Mr. D's quotations are too cramped to be illustrative of the *whole* of the article from which the quotations were made, it seems not improper, for the "first author" quoted, to direct his attention to pages 260 and 261 of Vol. XIX of the AMERICAN BEE JOURNAL, where he will find the subject more broadly treated. If I rightly construe the gist of Mr. D's critique, a fair digest of the whole of the article from which his quotation was copied, would illuminate any doubt, *pro* or *con*, having direct reference to the actual agencies which aid the fecundation of the melliferous flora, or flowers which are not nectar-producing; and thus relieve an apparent misapprehension. The second quotation in Mr. D's article (for which I have no further use), was quoted "second hand," the explanatory purport of which I, like Mr. Doolittle, am not inclined to endorse. That the flowers of many species of the vegetable world do not require insect aid in the process of fecundation is evident; and that any species of the melliferous flora is absolutely dependent upon the insect tribes for their fecundation, I am not prepared to accept as an axiom from which deductions may be drawn, that harmonize with the principles of sympathetic reproduction as unfolded in cosmogony.

At the commencement of the first paragraph on page 7, Mr. Doolittle records another slight mistake in asserting "that he (myself) represents that both the breeze and the bees may be needed to fertilize the same and all plants." Such is not the sense of the quotation. The phrase, "may be needed," is not in the sentence quoted, neither does it embody the idea that all or even any flower actually demands the aid of the breeze or insects to complete the designs of nature in its cosmic capacity, so to speak. If my authority, and my deducements therefrom are correct, flowering plants existed on our globe many epochs prior to the development of an animal organism capable of winging its way from "flower to flower," and accelerating the increase of vegetation by insect "fertilization."

According to Dr. Hitchcock's arrangement of the different animal and vegetable species, in the order of their development, geologically, flowering plants existed on the land during the latter part of the Salurian and Cambrian periods, when no animal life except that inhabiting the water existed (or, in fact, could exist); while the sub-order, hymenoptera, to which the honey-bee belongs, did not make their appearance until the latter part of the Tertiary period. Such being the premises, it is evident that the luxurious growth of flowering vegetation, which matured and decayed during the limitless evolutionary epochs intervening the two periods mentioned, especially during the Carboniferous period, must have depended upon other agencies than those of the honey-bee, or other nectar-feeding insects, for their "fertilization;" as the earlier insects seem to have been allied to the Aphis family.

That the flowering plants, which evolved ther organism contemporary with that of the nectar-subsisting insects are dependent upon those insects, to a greater or less degree, through sympathetic sources, for their perfect fecundation, does not appear improbable; in fact, the influences pertaining to the development of cosmic matter in all its organic forms, tend to support such a theory, and confirm the idea of nature's "prime method" of distributing the fecundating element.

As Mr. Doolittle says in his concluding paragraph, "Let us have the scientific" part, from those qualified to impart it.

Cumberland, ♀ Maine.

For the American Bee Journal.

Sectional Brood-Chamber Hives.

DR. G. L. TINKER.

The extensive discussion during the past year in the bee-papers, on the methods and the advantages of reversing brood-combs, as well as the result of the trials, has proved that there is no profit in reversing single combs, because of the great labor required, and that there is no advantage to be gained from the practice. Like many discussions on other subjects, the truth is made to appear, although, as in this case, the truth that we had sought—the germ of wheat sifted from all the chaff—is quite unlike what we had been seeking or had anticipated.

It is no new idea, by any means, that the getting of the brood close up to the sections in working for comb honey is a measure of great value. As the outcome of all the invention and discussion we have discovered perhaps all of the measures by which brood can be brought near the sections, so that we can now point out the one plan most practicable and valuable. Here I wish to say that no one man is entitled to all the credit of the discoveries made, because all or nearly all bee-keepers have had a part in making them, and have prepared the fraternity at large for an innovation in our methods, that without this preparation of the apicultural mind would have been impossible. The credit, I am bold to assert, is due rather to the great fraternity of bee-keepers who, through their united labors, have not only made discovery possible, but now make the introduction of the new appliances and methods certain. As the matter stands, one bee-keeper is as much entitled to the benefits as another, and I trust and believe that all will look upon it in this light, and hesitate not by virtue of a just right to adopt the improved methods as soon as convenience will warrant, and the revotion in the construction of brood-chambers and in our methods of management will demand.

But first, what is the most practical and advantageous method of disposing the brood near the sections, at will? Beyond question it is the proper management of the shallow sectional brood-chamber! Has it any disadvantages? I assert fearlessly that it has not, neither in wintering, the laying of the queen, or in the manipulation of hives or combs!

Until about 5 years ago, a hive, the brood-chamber of which was in three shallow sections, each 5¼ inches deep by 12x16 inches inside, has been in this town and contained bees uninterruptedly for 30 years. The colony in its thin walls of walnut had resisted the cold and the buffeting of storms for 30 winters, and it at last succumbed to the depredation of robber bees that gained entrance by its many rotten corners. It had always done well, was generally on hand with a rousing swarm in season, and besides stored a liberal surplus for its owner. When Father Langstroth, a few years since, recommended a thin walled hive for out-door wintering, I was quickly reminded of this old hive. (The pannels in the sides of each of the cases were not over ¼-inch thick.) That it had not been manipulated on the modern plan of tiering-up the cases and the placing of the brood next to the super, was no fault of the hive. The combs were attached to top-bars in each case on the Dzierzon plan.

REVERSING HIVES.

In a shallow sectional brood-chamber I believe that there is no advantage whatever to be derived from reversing its sectional parts. The placing of the brood next the super, and any honey that may be in the upper case below the brood, will accomplish all that can be done. I shall therefore have no use for a reversible hive. Again, as we shall not have occasion to handle the frames very much, but the sectional parts instead, it will not be greatly to our advantage to have the frames as readily movable as are Langstroth frames. On this account a very simple case is all that is necessary to hold the frames—a case without ornamentation, clamps, screens, or anything of the kind. Neither do we want a complicated bottom-board, but all the parts of a practical hive of this nature should be, *and will be* made only of a few parts, and all very plain and easy of construction. The frames can be supported in the sectional case on strips of sheet-iron cut 5-16 of an inch wide and as long as the case is wide inside, the strips to be inserted in thin saw-cuts made 5-16 of an inch from the inside lower edges of the ends of the case and to enter the wood only 3-16 of an inch. This construction will give a proper bee-space under the frames which should extend to the top of the case. The width of the end-pieces of the frames should be 1⅜ inches, and the thickness ¼ of an inch, making a closed-end frame to rest on the sheet-iron strips. The width of the top and bottom bars should be the same, and may be ¾x¼ inch in thickness.

Here let me call the attention of bee-keepers to the comparative cheapness of these frames, if dovetailed at the corners, to those in common use. They need no nails, and a set of 14 for one hive can be put together in a few minutes; and as they can easily made with great accuracy, they will always fit nicely in the cases. The length of the frame might well correspond with the 4¼x4¼ sections now so popular. The outside would therefore be 17 inches long, and if made just 5 inches deep, it will just take one-half of a sheet of foundation cut the regular size for the Langstroth frame. The frames can be taken out of the cases very readily, since, being very shallow, the cases can be set on end and the frames pushed through, one or more at a time. Hence, the worthlessness of all clamps to hold the frames will be apparent.

Again, if we are to handle hives rather than frames, I can see no advantage in having so many frames in each sectional case. I think that we will find 7 enough, though many may prefer 8 or 9 frames to the case. It will be then very light to handle, but to further lighten it I would make the sides only ⅜ of an inch thick and the ends ⅝, and make the usual hand-holes in the ends or nail cleats across the ends a little above the middle line to handle them by.

The bottom-board I would make out of ½-inch stuff, with a cleat of 6-inch stuff across each end, the rear piece to be 2 inches wide and the front piece 5 inches; the board to be cut 1⅛ inches shorter than the hive is long, and the wide cleat nailed across 2 inches from the end. This would give an entrance of ½ inch across the front. If blocks are nailed on each side to go under the front corners of the hive, ordinary entrance blocks can then be used.

Sectional hives containing only 7 or 8 frames in each section will be so light that we will find it an easy task to carry them back and forth from cellars in wintering, where the bees can be placed under our full control and wintered in a scientific manner, which we shall never be able to do in out-door wintering where we cannot regulate the temperature at will. Only one of the sectional cases, well filled, will be necessary for each colony for the winter.

To operate a sectional hive of shallow frames successfully, we shall need a honey-board with strips of perforated-zinc set in thin saw-cuts made in the edges of the slats composing the board. This construction and use of perforated-zinc is my invention, but it is free to all to use. As any kind of a sectional-case or super can be adjusted to this hive every bee-keeper will be expected to use his favorite.

The capacity of two of the sectional brood-chambers will about equal the 8-frame Langstroth hive, but many would prefer to use three of the parts in building up colonies for the honey harvest. The frames alone are made to reverse, but we will need to reverse them but once, and that simply to get the frames filled out with comb plump to the sides all around. Ordinary 6-inch boards can be split and dressed to ⅜ of an inch for the sides of the cases, and we shall have no trouble to get whole boards wide enough for the bottoms and covers and yet there will be ample room for top-storing on the hive. For a very cheap hive we will never get a cheaper, and a better hive for large results may not be possible. It will hardly be necessary to add in conclusion that this hive is not patented or patentable except in one or two features, which are my inventions, and are hereby freely given to the public.

New Philadelphia, O., Feb. 7, 1886.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and City and Country	2 00	1 50
New York Independent	4 00	3 30
American Agriculturist	2 50	2 25
American Poultry Journal	2 25	1 75
Journal of Carp Culture	1 50	1 40
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Apiary Register—100 colonies	2 25	2 00
Dzierzon's Bee-Book (cloth)	3 00	2 00
Dzierzon's Bee-Book (paper)	2 50	2 00
Quinby's New Bee-Keeping	2 50	2 25
Langstroth's Standard Work	3 00	2 75
Root's A B C of Bee-Culture	2 25	2 10
Alley's Queen-Rearing	2 50	2 25
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

Local Convention Directory.

1886. *Time and place of Meeting.*

Mar. 20.—Patsalaga, at Arcadia, Ala.
M. G. Rushto , Sec., Raif Branch, Ala.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Good Prospect for Honey.—8—Jno. C. Gilliland, (7–16), Bloomfield, ♀ Ind., on Feb. 24, 1886, says :

My bees have wintered well, only one colony lost. To-day they carried in pollen lively. There has been very little loss of bees in this county this winter, and the prospect is good for the honey yield next season.

Bees Doing Well.—L. Highbarger, Adeline, ♂ Ills., on March 2, 1886, writes :

Bees are doing much better than they did at this time last year. So far I have been unable to discover any signs of diarrhea ; but at this time last year they were badly diseased. The reason for this is that they have a better quality of honey to winter on. Whenever our bees have honey-dew for winter stores we can expect to meet with losses.

Feeding Sugar Syrup.—W. J. Dawson, Dickson's X Roads, ♂ La., asks this question :

Why do bee-keepers use sugar for feeding when honey is quoted at 3½ to 4 cents per pound ?

[The only reason which can be given, is that some prefer it for winter use, even if it is dearer.—Ed.]

Bees Wintering Well.—27—F. A. Snell, (70–100), Milledgeville, ⊸ Ills., on Feb. 25, 1886, says :

I commenced on June 1, 1885, with 70 colonies of Italian bees ; during June I sold 5 colonies. I secured 4,000 pounds of surplus honey. On Nov. 18, 1885, I put 100 colonies into winter quarters in good condition. Late in May, 1885, I reported 105 colonies, but by June 1 I had disposed of the 35 colonies, thus leaving me 70 with which to begin the season for surplus. About one-tenth of my bees were worked for queen-rearing. My bees are wintering well so far.

Bees Working on the Elms.—B. F. Carroll, Dresden, ♂ Texas, on Feb. 25, 1886, writes :

The bees began work on the elm bloom on Feb. 8, and 10 days since they have gathered a nice lot of pollen and honey. The weather is very fine for bees and farmers, and both are busy. Corn planting is going on briskly. Bees have wintered well after our first zero weather ever felt here. I hope this may be a prosperous year to all apiarists.

How Larval Bees Eat. — B. J. Bailie, Sarnia, Canada, says :

I understand that Mr. J. Rutherford, of Scranton, Pa., claims to have discovered that larval bees live by *absorption* (osmotic action), and that they are not fed as our bee-books would have us to understand. I wish to know who was the first to discover this fact.

[This is a well known fact. It is not confined to larval bees, but is also true of many maggots, and nearly all entozoa. The tape-worms have no mouth, nor alimentary canal, and so of course they have no other way to secure nourishment. When insects or worms are bathed in liquid aliment, this is the common or usual method of securing the nutritious material. Some of our worst insect pests live wholly by imbibition, or by receiving food through osmosis. The Hessian-fly maggot is an example. It is impossible to say who was the first to discover this fact.—A. J. Cook.]

Bees in the Cellar.—Noah Field, Spencer, ♀ N. Y., on March 1, 1886, says :

We are having a cold spell now. My bees are in the cellar, and they appear to be doing well at present. I have one most excellent colony that has not had a dozen dead bees in its hive this winter, and I think that it has over 100 pounds of honey in the hive. I suppose if some bee-men had it they would make 4 or 5 colonies out of it. I think that the Bee Journal contains so many good articles. I can hardly wait for each number to reach me.

Wintering Bees—Old Foundation.—J. M. A. Miller, Galva, ⊸ Ills., on Feb. 25, 1886, writes :

I have just examined my 28 colonies of bees that are in the cellar, and I find them seemingly to be in a state of quietude that indicates comfort. They were put into the cellar about Nov. 25, the hives being placed on 2x4 inch scantling set edgewise upon blocks 8 inches thick, with the entrances all open, and no extra preparation of chaff, quilts, or blocks, etc., but they are simply in a dry cellar with some cloths over them that were on during the summer, and the covers are on the same as in summer. I think that I never have seen bees in better condition, not a pint of dead bees being on the cellar bottom. Why is it that if bees do so much better on the summer stands in chaff hives, we so often see this expression, or a similar one ? "My bees are on the summer stands in chaff hives, except a few *weak* ones that I put in the cellar." If the chaff hive is *so* nice, and *so* much better than the cellar, why not put the few weak ones on the summer stands, and the strong ones in the cellar ? I sell all of my honey in my home market, and I have no trouble in selling it. My trouble has been for two years past to produce enough to supply the demand. About 80 per cent. of all the bees in this vicinity died last spring during the cold, May storms. I lost 35 colonies. There was no brood in the hives, and the old bees died. I have a quantity of foundation that is two years old. Will it pay to have it worked over ? or will it do to use it as it is ? It seems to me that the bees would take to it better if it was fresh.

[You can freshen the foundation by dipping it in warm water just before using it.—Ed.]

No Signs of Disease. — Gotlieb Hoffman, Symerton, ♂ Ills., on Feb. 27, 1886, says :

My bees are thus far wintering nicely, both those in the cellar and those on the summer stands packed with chaff. They had a fine flight a few days ago, and there is no sign of disease.

Reversible Frames.—B. Losee, Cobourg, Ont., on Feb. 22, 1886, says :

Mr. T. C. Davies, on page 107, says that he is interested in a reversible-frame bee-hive. I have used mine during the last 15 years, being hollow walled, formed by wide standing-frames, half-inch rods, top and bottom reversible, with perforated metal divisions for producing honey in sections, arranged to be moved without disturbing the sections in the crates above.

Bees Packed in Sawdust.—J. R. Nichols, Danville, ⊙ Ind., on March 2, 1886, says :

My 56 colonies of bees are wintering nicely, one-half of them being in the cellar, and the balance packed in sawdust on the summer stands. It looks now as though they would get through the winter without the loss of a single colony.

Bees in Good Condition.—F. M. Taintor, Coleraine, +o Mass., on March 1, 1886, says :

Bees in this locality appear to be wintering finely. Mine were never in better condition than at present. I placed them in the cellar on Nov. 16, 1885, and since then they have been very quiet, with the thermometer at 45°. The weather this winter has been very favorable for bees out-of-doors. We have had only 2 weeks of extreme cold weather this winter. I look forward with pleasure to the time I place them on the summer stands. I look forward with pleasure to Friday when I always get the AMERICAN BEE JOURNAL. Of the several bee-papers printed, the old "American" stands pre-eminently at the head, in my opinion, and now as the price has been reduced to one dollar a year, no bee-keeper can afford to do without it.

Managing Prime Swarms.—O. P. Miner, Taylor Centre,⊙N. Y., on Feb. 27, 1886, asks the following:

Would the following be a good way to manage a prime swarm in a Langstroth hive, for comb honey? Hive them on 7 brood-frames and 2 wide frames filled with sections—one on each side of the brood-nest; when sections are nearly filled, place them on top of the brood with others and replace them with brood-frames. In replacing should they be placed in the spaces made vacant by the wide frames, or spread the frames and place them in the centre of the brood?

[Yes; that plan will work nicely. Place an empty brood-frame between two full ones; but it would be very advantageous to fill the empty frames with comb foundation.—ED.]

Feeding Bees in the Cellar.—A. B. Howe, Council Bluffs,♀Iowa, on Feb. 26, 1886, writes:

Bees are wintering exceedingly well in this part of the country. I have about 20 colonies nicely put away in the cellar, and about as many more on the summer stands in chaff hives. I examined all of them a day or two ago, and found all in very fine condition. I have commenced feeding those in the cellar to get early brood. I feed about two spoonfuls of extracted honey or sugar syrup at the entrance every evening. In a very few days the bees can be trained to come down to the entrance and take the honey. We have had very fine weather for bees this week; they could have a flight almost every day. I look for a good honey crop in this locality this year.

Convention Notices.

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m.
M. E. DARBY, *Sec.*

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.
B. F. CARROLL, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Kansas City, Mo., on Apr. 29 and 30, 1886. It is desired that this meeting shall be better than any of its predecessors. Essays will be read on the leading subjects in bee-culture, which will be announced as soon as arrangements are completed. Let all who have bees, queens, fixtures, etc., bring them if possible. Due notice will be given in regard to a hall.
P. BALDWIN, *Sec.*

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Mar. 8, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Sales have been quite good this month for best grades of comb honey, some bringing 16c. per pound when in perfect order. There is a light supply here, and now is a favorable time to forward shipments. Extracted honey brings 6@8c.
BEESWAX.—25@26c. per lb.
R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We note an improvement of sales of honey the past week, but prices continue to rule low. We quote as follows: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.
BEESWAX.—27@28c.
MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.
BEESWAX.—Firm at 22½c. for prime.
D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is no speculation whatever in the market, and the demand is slow for extracted honey from manufacturers, while it is fair for honey in glass jars, for table use. Demand for comb honey is slow and the market is well supplied with all kinds. Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.
BEESWAX.—The home demand is good, while arrivals are slow. We pay 25@27c. for good yellow to choice.
C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—There is a great improvement in the demand of best 1-lb. sections since our last report, and all receipts are finding ready sale at 14 cents, with occasional sale of single crates at 15 cents. Two-lbs. are neglected, very little wanted at 13 cts. Old honey, 10@11 cts. and slow. Extracted, 7@8c.
BEESWAX.—Scarce at 25c.
A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are improving and we have a good trade in comb, although prices are not as firm, owing to good prospects in California for a large crop having reduced their prices about 2 cts. We quote as follows: Choice comb in 1-lb. sections, 16c.; fair to dark, 12@14c.; in 2-lb. sections, 12@14 cents. Extracted is dull and slow. Dark brings 3 1-2 to 4c.; white, 6@7c.
BEESWAX.—23c.
CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—The sale for honey for the past month has been as light as we have ever known it, and prices are weak. One-pound, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.
BEESWAX.—30 cts. per lb.
BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The market is very dull. We quote as follows: White and extra white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.
BEESWAX.—Quotable at 23@25c., wholesale.
O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is very dull. Best white in 1-lb. sections, 14c. There is considerable in commission houses and prices are liable to be lower.
BEESWAX.—It is in good demand at 25@28c.
M. H. HUNT., Bell Branch, Mich.

Convention Notice.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The next meeting of the Patsalaga Bee-Keepers' Association will be held at Arcadia, Ala., on March 20, 1886.
M. G. RUSHTON, *Sec.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
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923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

Beeswax Wanted.—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

Wire Nails have advanced in price, as will be seen by quotations on psge 159, last column.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for $1.30.

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

Golden Rules for successful advertising, are these : 1. Attractive display. 2. Salient points clearly stated. 3. Repetition. Don't spend all your money in one insertion. 4. Choice of the Paper which reaches the people you want to reach. *These rules never fail.*

◆

The Guide and Hand-Book, is a book of ready reference and an encyclopædia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 160, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for $1.30

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

Advertisements.

FOR SALE.

APIARY 120 ft. long, 50 colonies arranged for comb honey—Simplicity style. Dwelling-house new, barn, poultry-houses, 30 acres arable land, board and wire fence, and 50 acres woodland ; on the hills 1 mile from centre of Yazoo City, Miss. There are 2 acres of strawberries and about 600 young fruit trees (200 bearing), springs of running water, &c. Good fruit and bee country Farm and Apiary at the low price of $2,500—one-half cash, balance in 1 year. If you want a bargain, at once address, " WIEDWOOD PLACE,"
9A2t YAZOO CITY, MISS.

COMB FOUNDATION.

BROOD FOUNDATION 38 cents per pound. Thin foundation 48 cents per pound. Other Supplies cheap.
Send for our Price-List at once.

KENNEDY & LEAHY,
10A1t HIGGINSVILLE, Lafayette Co., Mo.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Good News for Dixie !

SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. *Price List Free.*

J. M. JENKINS,
8A4t **Wetumpka, Ala.**

SEND FOR IT.

We have just issued a new **Circular** that will interest any bee-keeper. Send your name on a postal card for it.
Cash paid for Beeswax.

A. B. HOWE,
8A4t COUNCIL BLUFFS, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEESWAX.

We pay **24c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

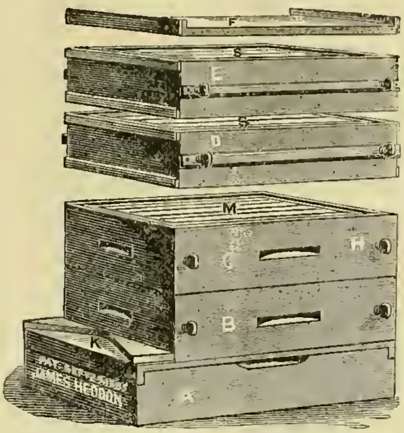
Italian Bees in Iowa.

60 **CENTS to $1 per lb.; QUEENS, 30 cents to $2.50.** NUCLEI and COLONIES. Order from my new Circular.

OLIVER FOSTER,
10Atf MT. VERNON, Linn Co., IOWA.

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail ; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections ; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand ; a slatted honey-board, and cover ; two 6-inch brood-chambers, each containing 8 frames ; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers :

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices : Stand, 14 cents ; honey-board, 8 cents ; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time : For 10 or more hives, 5 per cent. discount ; for 25 or more hives, 7 1-2 per cent. ; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison-St., CHICAGO, ILL.

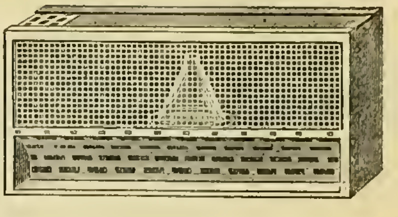
CLARK'S BEE-KEEPERS' DIARY.

THREE cents only. Price-List of Supplies, Bees, Italian and Carniolan Queens, free. Send for them *now.* J. W. CLARK, (box 34),
10A1t CLARKSBURG, Moniteau Co., Mo.

MY 650 Colonies of bees are more than I can well handle, so I will sell for spring delivery 100 full colonies, $5.00 each for hybrids and $6.00 for pure Italians. Discount on larger numbers. I will also sell a few colonies of Caucasian bees, which breed I imported from the Caucasus Mountains, Asia, in 1880, and have proved to me of great value. Address,

JULIUS HOFFMAN,
CANAJOHARIE, Montg, Co., N .Y.
Formerly Fort Plain, N. Y. 9A3t

Alley's Drone and Queen Trap.



Price, by Express, 50 cts. ; by mail, 65 cts. ; 12 in the flat, and one nailed (13 in all), $3.50 ; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

60 New Style, Embossed Hidden Name and Chromo Visiting Cards, no 2 alike, name on, 10c., 13 packs $1 ; warranted best sold. Sample book, **4c.** L. JONES & CO., Nassau, N. Y.
11A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

C. B. LEWIS & CO.
51Atf. **WATERTOWN, WIS.**

GREEN'S FRUIT GROWER and 100-page **FRUIT GUIDE** free, or 3 different copies of our paper and Catalogue with 5 colored plates for 10 cents. Address, Green's Nursery Co., Rochester, N.Y. **How to Propagate and GROW FRUIT** is a new book of 160 pages, 75 illustrations and colored plate.—" It has saved me $50." R. L. F.—Price, 50 cts. 9A6t

SEE SHUCK'S ADVERTISEMENT IN ANOTHER COLUMN.

Italian Bees and Comb Foundation.

50 to 100 **COLONIES** of very choice Italian Bees for spring delivery. Prices greatly reduced. Nuclei, Queens, and Bees by the pound for the season.

COMB FOUNDATION FOR SALE.

Wax made up by the lb. or worked for a share of the wax. Samples of foundation free. Price-List ready.

O. H. TOWNSEND,
10Etf ALAMO, Kalamazoo Co., MICH.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Established 1851
BAKER & CO.
Satisfaction Guaranteed
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
CLARK & MONROE STS.
FOOT BLOCK.
CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES

SEND 65 CENTS

and get by return mail one of our

Improved Drone and Queen Traps.

We have attached to the Trap a simple device, so in case the bees swarm while the apiarist is absent, the queen and bees can return to the parent hive. Send the amount in postage stamps. Circulars now ready.
11Etf **Henry Alley & Co., Wenham, Mass.**

1886
GREGORY'S
SEED
CATALOGUE.
1886

FAIR AND SQUARE DEALING.

Believing that if a man has dealt squarely with his fellow-men his patrons are his best advertisers, I invite all to make inquiry of the character of my seeds among over a million of Farmers, Gardeners and Planters who have used them during the past thirty years. Raising a large portion of the seed sold, (few seedsmen raise the seed they sell) I was the first seedsman in the United States to warrant (as per catalogue) their purity and freshness. My new Vegetable and Flower Seed Catalogue for 1886 will be sent **FREE** to all who write for it. Among an immense variety, my friends will find in it (and in none other) a new drumhead Cabbage, just about as early as Henderson's, but **nearly twice as large!** **James J. H. Gregory, Marblehead, Mass.**

EVERGREENS

and European Larches; all sizes. All Nursery grown at prices never before offered. Norway Spruce, Scotch, Austrian, White and Mountain Pines, Balsam Fir, Northern Red Cedar, and Arbar Vitea from $3. per 1,000 up Shipped with safety to all parts of the U.S. Price list free. **D. HILL,** Evergreen Specialist, **Dundee, Ill.**

4E4t

Western BEE-KEEPERS' Supply House.

We manufacture Bee-Keepers' supplies of all kinds, *best quality* at *lowest prices.* Hives, Sections, Comb Foundation, Extractors, Smokers, Crates, Honey Buckets Veils, Feeders, Bee-Literature, etc., etc. Imported Italian Queens, Italian Queens, Bees by the lb., Nucleus or Colony. "Bee-Keepers' Guide, Memoranda and Illustrated Catalogue" of 48 pages FREE to Bee-Keepers. Address **JOSEPH NYSEWANDER, DES MOINES, IOWA.**

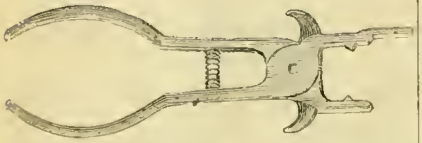
1E6t

MAKE YOUR OWN FERTILIZERS.

Where to get the materials in the cheapest form; how to make up formulas for different crops; seven ways to make plant food of bones, ground and whole; all about fish for manure and where to get them, and wood ashes, &c.,&c. A book of 120 pages, crowded with valuable information, all given in the plain, common sense way farmers can understand. By mail 40 cts. Also books on Onion, Squash, Cabbage, and Carrot and Mangold raising, at 30 cents each, or the five for $1.35 by mail. Two of these have been through 10 and 15 editions. *My large Seed Catalogue free to all who write for it.*

JAMES J. H. GREGORY,
MARBLEHEAD, MASS.

JONES' FRAME-PLYERS.



FOR taking frames out of hives, or moving them in any way desired. It is made of galvanized iron, and can be utilized in many ways. It has a long claw for loosening frames, and a book which may be used for carrying other frames besides the one held by the Plyers. Price, 40 cts., by mail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

SEE SHUCK'S ADVERTISEMENT IN ANOTHER COLUMN.

BEE Hives and Sections —Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHAS. F. MUTH & SON,
Freeman & Central Ave.. - CINCINNATI, O.
P.S.—Send 10c. for Practical Hints to Bee-Keepers

FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Entrance Feeders, Top and Bottom Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

J. M. SHUCK, Des Moines, Iowa.

10A1y

Bingham Smokers

AND

HONEY-KNIVES.

Send for Circulars.

Bingham & Hetherington,
ABRONIA, MICH.

Yes, **IF** you want 2-Simplicity-frame Nuclei shipped about June 10, in strong condition, with about 1 lb. of bees and an untested Italian queen, for $2.00, you must engage them by March 20; then I will ship goods by the above date, for cash on safe arrival. Also, Bees per lb. cheap, about June 1. As I am an experienced queen-breeder, I will mail you such queens as I would be willing to risk in *my own Apiary.* Inquiries will cheerfully be answered. Address,

IRA D. ALDERMAN,
10A1t TAYLOR'S BRIDGE, Sampson Co., N. C.

SECTIONS.

Job Lot—Cheap!

WE have received a Job Lot of **25,000** One-Piece Sections with square groove, which we will close out at **$4.00** per 1,000, or $2.50 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Given's Foundation Press

THE GIVEN PRESS stands in the **front rank** for manufacturing **FOUNDATION in Wired Frames,** as well as foundation for **SECTIONS.** Without a dissenting voice, all of our customers affirm its superiority.

Send for Circular and Samples.
J. R. CALDWELL & CO.,
1Atf HOOPESTON, Vermillion Co., ILL.

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo. 4A1y

(ESTABLISHED 1864.)

BEE-SUPPLIES. Wholesale and Retail.

We furnish EVERYTHING needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send your address on a Postal card, and we will send you our Illustrated Catalogue free. **E. KRETCHMER,**
6A8t 14Ctf COBURG, Montgomery Co., IOWA.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ⅓ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

12,000 SOLD SINCE 1876.

13th Thousand Just Out!

10th Thousand Sold in Just Four Months!

4,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1A1y Agricultural College, Mich.

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. March 17, 1886. No. 11.

The British Bee Journal, alluding to the new bee-disease, states that, in its opinion, supported by actual experiment, the new bee-disease of America is none other than the *Baccillus delphilis* (auct *Gaytoni*) of Mr. Cheshire, and it further states that "a colony treated carefully with phenol has been entirely freed from all traces of the disease."

◆

The Postage on Merchandise, sought to be doubled by Senator Wilson, as mentioned last week, has had a "set-back." The House Committee, last Wednesday, decided to report adversely to it. The measure is not only uncalled for and *unjust*, but is against the policy of the Government, and has caused a perfect storm by "protesting merchants" all over the country. The measure, if carried, would be a detriment to the Postoffice Department as well as an injustice to the general public; and we do not believe that Congress will commit such an error. Senator Wilson still insists that he will get his bill through the Senate, if possible—but it is highly improbable that it will pass the House of Congress.

◆

Beginners in bee-culture, during the first year, generally know it all; after that they find out by degrees that they know much less about the pursuit. Mr. F. L. Dougherty, in the *Indiana Farmer*, puts it thus:

> It has always seemed somewhat strange to us why beginners in bee-culture were not satisfied to accept the teachings of practical bee-keepers and follow them, until they gained sufficient knowledge of their own to save them from falling into the theoretical pitfalls of hearsay bee-keepers. Bees are not taught, but simply guided in a line with their instinct. They may be led in this direction to perform certain things that to the novice seem incredible. Success depends on a knowledge of the laws by which they are governed, and the advantage we are able to take of it for our own good.

◆

J. E. Pond, Jr., and M. P. Beckett have formed a partnership in the practice of law at North Attleboro, Mass. The BEE JOURNAL wishes the new firm prosperity.

Bees Not Well-Marked in Italy.—When the Editor of the AMERICAN BEE JOURNAL was in Italy, seven years ago, he visited many large apiaries, and upon his return, remarked that he there saw many colonies of bees—the markings of the bees being either very indistinct or the golden bands entirely lacking. Some doubted this, and a discussion concerning "Black Bees in Italy" followed. At that time we had much corroborative testimony, but now comes further proof from our friends and co-laborers, Mr. Ed. Bertrand, editor of the *Bulletin D'Apiculteur*, in Switzerland, and Mr. T. W. Cowan, editor of the *British Bee Journal*, of London, England. These gentlemen went to Italy, lately, together, and visited several of the "noted queen-breeders," and Mr. Bertrand, in his paper, makes the following remarks on this subject:

> "It is well known that all the bees of the Italian race have not got the three yellow bands of the abdomen equally distinctly marked. This I have substantiated on several different journeys. At Ornavasso, at Golasecca, and at Milan there are colonies only showing *two* bands. In 1881, at Milan, at the Sartori establishment, I saw drones as destitute of any yellow bands as any drones bred by our black bees. But abroad, three bright yellow bands are considered an indispensable sign of purity, hence the reason why Italian breeders, while attaching no real value in work to the color of the rings, endeavor to have no bees in their apiaries that will not show 3 bright bands."

Mr. Bertrand visited the Sartori queen-rearing establishment at Milan, Italy, two years after we were there, and in the above extract, he uses this very positive language: 'I saw drones as destitute of any yellow bands as any drones bred by our black bees." This coincides with our experience exactly. We saw precisely the same thing at that very place. With us, at that time, were Count Barbo, the distinguished President of the Italian Bee-Keepers' Association, and Signor Alfonzo Visconti de Saliceto, editor of the Italian bee-paper, *L'Apicolore*, published at Milan. We talked the matter over, and all agreed that the bees looked much inferior to our fine American Italians, for we took with us some samples of drones well-marked and well-developed, that were reared in the apiary of the AMERICAN BEE JOURNAL, in this city. These American Italians were admired by prominent apiarists, to whom we exhibited them in England, Scotland, France, Switzerland, Italy, Austria, and Germany. The only reason that we can give for the difference in the Italian bees bred in their home in Italy and those reared in America, is the extra care exercised here in breeding from the best colonies and for superior traits of character.

We are glad to notice by the above extract that the breeders of Italy are getting more particular and systematic in their work, and that in the future they intend to "have no bees in their apiaries that will not show three bright bands." To elevate the industry by breeding with care is surely worth all the labor it costs, and should be encouraged everywhere.

◆

The American Apiculturist for March is on our desk. By it we notice that Mr. Silas M. Locke has sold his entire interest in the business to his late partner, Mr. Philip H. Morant, who will hereafter conduct the business. We wish the "Api" success under the new management.

Blow, March Wind, Blow!

F. D. SHERMAN.

Blow, wind of March, and sing
Your songs unto the timid buds and grass;
Unclasp the fetters of the woodland spring
Hushed in its house of glass.

Blow, wind of March, and thrill
The languid pulses of the barren trees,
Until the empty hands with blossoms fill
And tempt the honey-bees.

Blow, wind of March, and wake
The sleeping violets with gentle words:
Spread your green canopy of leaves and make
A shelter for the birds.

Blow, wind of March, aye, blow,
Until the orchards heed your voice, and bloom;
Then whisper softly where the wild flowers grow
About the winter's tomb.

Lippincott's Monthly.

◆

A German scientific journal says that "bees are good storm-signals." The suddenness with which a bee raises a storm depends upon what portion of the anatomy the insect alights. If on the bare neck, "thunder and lightning!"—if not a stronger expletive—will follow immediately.—*Norristown Journal.*

◆

A Bearing Orange Grove in Chicago.—One of the greatest novelties of the age will be presented to the people of the Northwest, at the Exposition Building in Chicago, during the latter part of March, in the shape of a grove of bearing orange trees. This exhibit will be made in connection with an exhibit of Citrus fruits, such as oranges and lemons from the now famous orange section of the Pacific Coast, under the auspices of the Immigration Association of Southern California. The transcontinental railroads have generously offered to bring this exhibit to Chicago free of freight. It will fill twenty cars, and twelve men will accompany it. This will be a novel exhibit for the people of Chicago and the Northwest; and will attract crowds of people.

◆

New Price-Lists have been received from the following persons:

James W. Tefft, Collamer, N. Y.—4 pages—Queen City Hive.

O. H. Townsend, Alamo, Mich.—2 pages—Queens, Bees, and Comb Foundation.

Henry G. Pyle, Du Quoin, Ill.—2 pages—Poultry and Eggs.

Thos. Jackson, Portland, Maine.—10 pages—Forest City Nurseries.

Isaac F. Tillinghast, La Plume, Pa.—60 pages—Field, Flower, and Vegetable Seeds.

B. J. Miller & Co., Nappanee, Ind.—16 pages—Bee-Keepers' Supplies.

Aaron Low, Essex, Mass.—100 pages—Vegetable, Flower, and Garden Seeds.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

◆

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Cellar-Wintering of Bees.

Query, No. 215.—1. About what time should bees be put into the cellar for winter? 2. What should the temperature of the cellar be? 3. Should the hives be open at the top, or should they be covered? 4. About what time should they be put out in the spring?—C. S.

1. When there are no prospects of further flights; before freezing weather if possible. 2. 45°. 3. The hives should be covered. 4. When there is something for them to gather. —W. Z. HUTCHINSON.

1. From Nov. 1 to Nov. 20, according to the latitude. 2. From 42° to 47°. 3. The hives should be covered lightly. 4. About the time elm and soft maple bloom.—G. M. DOOLITTLE.

1. Before severely cold weather comes. 2. As nearly 45° Fahr. as is possible. 3. I prefer no upward ventilation; though in a good cellar it is not a serious question. 4. With us, about April 10—when pollen can be secured.—A. J. COOK.

1. The first very cold weather after a warm day, say the last of November or early in December in this latitude. 2. 45°. Try that which will keep them the most quiet, and do not guess at it as some do, but have a thermometer right there. 3. A little upward ventilation suits us, unless there is a large lower ventilation. 4. The first warm day of spring, not too early—March 1 to March 15 in this latitude.—DADANT & SON.

Feeding Bees in the Spring.

Query, No. 216.—At what time is it best to begin feeding bees in the spring to promote breeding? Should I begin before or after they commence carrying in pollen?—W. J. C., Ills.

When I do feed bees to stimulate breeding, I commence as soon as the bees can fly out nearly every day. But when my bees have plenty of honey it does not pay me to feed them.—G. W. DEMAREE.

Perhaps if they have an abundance of stores and plenty of spring pasture you need not meddle with them. If they do not do so of their own accord, try to have them breed fast about five weeks before you expect a harvest.—C. C. MILLER.

I do not advise stimulative feeding in early spring indiscriminately. If advisable at all it should be done early enough so that the young bees would emerge from the cells in time to allow the foragers to leave on the first appearance of honey. To this end a knowledge of the flora of the locality, and the time it begins to secrete nectar must be known and kept in mind. It takes 21 days from the egg to produce the worker, and 3 or 4 days more to make it serviceable.—J. E. POND, JR.

I will not attempt to advise you, but in this locality I would advise never to feed bees to stimulate breeding. If our hives and bees are what they should be, feeding could do no good. Brood development will go on as fast as other conditions will admit, without any feeding.—JAMES HEDDON.

I would not begin at all if they have plenty of stores. In any case I should not feed unless short of stores, before the bees can get pollen. The grand secret in building up strong colonies in the spring is to have plenty of healthy bees to begin the work. If they have ample stores they will then need no attention. If they have lost half of their numbers in wintering, and are diseased, they will require the brood-nest contracted, and protection on frosty nights. Then feed moderately on warm syrup.—G. L. TINKER.

Granulation of Honey.

Query, No. 217.—When extracted honey is to be sold in glass and in tin, it is desirable that the honey in glass should not granulate, and that in tin should granulate. By what means can granulation be retarded in one case and hastened in the other?—Me.

The granulation of honey is retarded by keeping it in a warm place and sealed from the air.—G. L. TINKER.

The granulation of honey can be hastened by storing it in a cold place, or retarded by storing it in a warm place.—H. R. BOARDMAN.

Keep the glass warm and the tin cold. After all, it may be a matter beyond your control.—C. C. MILLER.

A high temperature will retard granulation in honey, but when it is subjected to a low temperature it seems to granulate the sooner on that account. I would not advise tinkering with honey in any way. Keep it in the best place that you have, and rely on its purity and good quality to sell it.—G. W. DEMAREE.

Who can tell? Some kinds of honey granulate sooner than others. Heat will retard granulation and cold accelerates it, as a rule. The rule, however, can only be applied generally on account of the difference in various honeys. I will pay a handsome sum for a correct answer to this question; that is, for a full and complete answer; I fear, though, that I shall not have a chance to do so for a long time yet.—J. E. POND, JR.

In my experience clear liquid honey out-sells that which is candied in any receptacle, the only object in candying being to prevent leakage. Customers will, by their purchases, declare in favor of clear honey. To know how to prevent its candying, ask those who adulterate honey. I say, educate the people to liquify honey at will; buy it candied and use it either or both ways.—JAMES HEDDON.

Giving Bees Winter Flights.

Query, No. 218.—What is the best method of giving bees that are in a cellar a winter flight? What precautions should be taken as to weather, sunshine, temperature, etc.? What is the lowest safe temperature measured by a thermometer in the shade?—Me.

I do not approve of taking bees from the cellar for a winter flight. If it is to be done, however, I would have a warm, still day, with the temperature not lower than 50° in the shade.—W. Z. HUTCHINSON.

If they are quiet, do not give them any. A winter flight incites them to breed, and they may be restless after that. If they are taken out at all, the mercury should not be under 50° in the shade, and the sun must shine; without wind or clouds.—DADANT & SON.

I never, of late years, give mine such a flight, believing it worse than useless. Bees can safely fly with the mercury at 45° in the shade, providing the sun shines and it is still.—G. M. DOOLITTLE.

The cheapest method is to have the cellar all right, then no winter flight is necessary. Unless the temperature is above 60°, Fahr., in the shade, bees ought not to fly. Of course sunshine is desirable, and heavy winds very objectionable.—A. J. COOK.

Rearing Drones.

Query, No. 219.—Most apicultural writers advise the prevention of drone-rearing and excluding them if reared when working for surplus honey. On the other hand, a few think that colonies to do their best should have their proportion of drones; that their office is to generate heat and keep up the temperature of the hives, as well as to fertilize queens; that their large bodies and stomachs are better fitted for this purpose than workers; and they are allowed in the hive as long as brood or queens are to be reared, and then destroyed. Is it not possible that we are on the wrong track in entirely excluding drones? What are your ideas on this subject?—Pawtucket, R. I.

I think that the prevention of drone-rearing is a little over-done, and time will show in what respect.—H. D. CUTTING.

From my own experience in the production of honey, I find that a few square inches of drone-comb is no disadvantage. It is more than probable that they *do* assist not only in evaporating the honey, but also in maintaining the heat for the brood.—J. P. H. BROWN.

I allow from 2 to 5 square inches of drone-comb to the hive, and I believe that such an amount is preferable to either more or less.—G. M. DOOLITTLE.

I have carefully watched this matter, and wish no drones, except enough for use in mating, and these only from best colonies. Of course these should be sufficiently abundant that the queen need not be out long.—A. J. Cook.

It is possible, but not probable, that we err in curtailing the production of drones. They are never reared unless needed for the fertilization of queens. Five days before swarming bees will rear drones; after swarming, neither colony will rear them, unless the old queen is quite old and likely to be superseded.—W. Z. Hutchinson.

No, we are not on the wrong track. We can rear 3 workers where 2 drones are reared, and the 3 workers staying at home during the first 10 days of their life, will generate as much heat as 2 drones. Besides, drones are reared in warm weather, when the hive is sometimes already too warm, and the bees have to ventilate it at great labor. The necessity of drones, as of "setting-hens," is imaginary.—Dadant & Son.

Cutting Out Queen-Cells.

Query, No. 220.—Is it necessary to cut out all the queen-cells before introducing a queen, especially when introducing one into a hive whose colony has cast a swarm a few days before ?—D. J. A.

It is safer to cut out all the queen-cells.—H. R. Boardman.

It is safest to do so. If the hive has been moved a day or two before to a new location, so as to lose nearly all its flying force, it is hardly ever necessary.—C. C. Miller.

According to my experience it is essentially necessary as long as the swarming impulse is likely to be present, and the safest way at all times, and under all circumstances.—G. W. Demaree.

In swarming time it is not, and especially in the case indicated; but introducing queens to colonies having queen-cells is always risky. I never saw a colony that acted as if really queenless until deprived of all unsealed brood. Then there is the smallest risk.—G. L. Tinker.

I have introduced queens successfully where queen-cells were not all cut out; and I have lost them also in the same way. I advise the cutting out of all as a precautionary measure, for no one can foretell what the result will be. I think, as a rule, that colonies having queen-cells will not accept a queen as readily as those that are hopelessly queenless; that is, that have no queen and no brood from which to rear one.—J. E. Pond, Jr.

Not always, if the cells are nearly ready to hatch. Many a time have I successfully introduced virgin queens into colonies with many queen-cells almost ready to hatch. I supposed that the bees thought that one cell had given up its inmate and then vanished.—James Heddon.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⌐○ northwest; ○¬ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Apicultural Discussions.

JAMES HEDDON.

I have read Dr. Miller's article on page 132, and can say that he is right. While I know that he is not pointing his finger at me, unless in prospective, I will assure him that I, for one, will try to avoid the spirit which he and many so much dislike. If I have not done so as much as I should in the past, I am sorry for it; and now, while so many of our leading bee-keepers are cheering my late efforts to make our pursuit a little easier and more profitable, and according to me all the merit and honor I ask or deserve, it is hardly possible for me to harbor any ill-feeling toward any one.

I do not think that Dr. Miller understands Mr. Clarke in coming forward in his jolly manner. I take it, that "Come on, MacDuff," has reference only to a good-natured, logical, and well-meant controversy.

When we see such statements as are made by Dr. Tinker, on page 154, wherein he describes my hive with some of its valuable features omitted, and makes an effort to persuade bee-keepers that I have no right of invention, and finally claims the invention for himself, and tries to give my hive to the public, we see that which is apt to cause ill-feeling in the minds of many; but I feel sure that time and the good judgment of bee-keepers will see the matter in its true light, and act accordingly.

I do not desire to mention my new hive or system of management in the reading columns of the Bee Journal (I can do all my advertising in the space I pay for); but if I am called upon to answer questions, giving the results of two seasons' experiments with the hive and its management, I will cheerfully comply with the requests to any extent which the Bee Journal thinks its readers demand.

Dr. Miller asks if the new hive is not "fussy?" No; not in its manipulation. It is, in that, the simplest and best hive that I have ever used. The space between the two tiers of brood-frames is too low down to be troubled much with brace-combs.

Again, my opinion is, and my experience proves that the space between the two sets of combs is an *advantage* in wintering if two sets of combs were to be used; but again, experience and observation satisfies me that one case is best to winter in. Without any direct experience, Dr. Tinker "fearlessly" asserts favorable answers to Dr. Miller's queries. From experience with the new sectional brood-chamber hive, I will state the following in refutation to the mistakes in Dr. Tinker's conceptions after reading my book mailed to him on Jan. 8:

1. My hive, made as he describes it, is fully covered by my invention.

2. The way in which he proposes to place the tin-rests, is a practice of Mr. Manum's, and was discussed by him and myself last December. I prefer it as I have it.

3. The screws in my hive press the frames tightly, giving much better control of the cases when handling the frames by cases, and do away with nearly all of the objectionable gluing.

4. As to the preferable size and number of the frames and cases constituting either the brood or surplus department, that is merely optional with the peculiar taste of each bee-keeper, as is stated in my book and patent specifications; but experiment has taught that it is best to use two brood-cases (and rarely more) 8 frames wide, both having the combined comb capacity of 10 standard Langstroth frames. Four years' experience in contracting hives compels me to believe that one of the brood-cases gives the right capacity during the period of contraction; all of which is fully explained in my book.

5. As stated in the chapter on the new hive, my double-interchangeable brood-chamber, *while two or more brood-cases are used*, admits of keeping the brood always up close to the surplus receptacles, besides accomplishing almost all the advantages hitherto expected reversing to accomplish, but when the hive was contracted to one brood-case, I found advantages in reversing that case, and so we did in some instances when two and more brood-cases were united. It is little trouble to make *all* the cases invertible, and it has many advantages, with no disadvantages, as far as all experiments have yet discovered.

In Dr. Tinker's description of my inventions, experience compels me to say that he has left out many good and valuable features, and in describing and detailing other meritorious points, he has repeated the descriptions given in the chapter on the subject, on pages 88 to 106 of my book. In some instances almost my very words are used. He may have done this inadvertently, but that he *has* done it, no one who has read the chapter will deny.

The new hive is not without fault, though I now think of but one. It costs more than single brood-chamber hives, and requires very accurate workmanship and material that is perfectly seasoned. I believe that this hive and its new and peculiar system of management will undergo a reaction, and then a re-reaction in the minds of bee-keepers. It is so different from all others, both in construction and method of management that its peculiarities have to be learned physically as well as mentally. All my students disliked it at first, but all gave it the preference after becoming accustomed to it. One trial hive, placed among other kinds, would hardly have a fair showing; but truth will finally prevail. The merits of the hive will defend it; and I hope the honor of our brotherhood will defend its inventor.

Several have written me to know what I claim, and what my patent covers. I think that my patent fails to cover all that I have invented, and that I am also entitled to, but my very able patent attorneys tell me that they think my patent will hold more than I imagine, when forced to legal test. Patent law is also complicated, and perhaps no one can tell just how much I could hold legally without a test case in the United States courts, and this, I trust, will never be needed. Outside of the profession false ideas prevail regarding the legal rights of patentees.

For the past 20 years I have been associated with one of the most successful patent attorneys in our country, and I will, in the near future, write an article on that subject, and from the best authority endeavor to clear up some of the mistaken ideas regarding it, that prevail among our bee-keepers.

Dowagiac, ♀ Mich.

For the American Bee Journal.

Consumption of Extracted Honey.

C. W. DAYTON.

That honey is and always will be considered a luxury, I believe there are ample reason for doubt, especially in the case of extracted honey. In the first place, extracted honey is as cheap, or cheaper, than corresponding grades of cane-sugar. As to the grape-sugar, we need not expect much from that unless it be from the commercial article which, it seems, has already acquired a reputation that bids fair to drive it entirely out of use except as an adulterant. Without question, there will be maintained as wretched a subsistence, as there will also be gloomy times for all parties, when all of our food is composed of adulterants. That people do not buy honey and consume as large quantities of it as of cane-sugar, is nothing strange, unless it is that it would be an impossibility. Were the people of the United States to cease using sugar for a week, and use honey in its stead, there would not be enough honey to fill the gap.

The main point for consideration is the limited but growing acquaintance regarding the uses to which honey may be put, and being suspicious of the honest man's enemy (adulteration), all wish to know the method by which honey is obtained. Quite all of those who buy honey (notwithstanding so many who *never* use it) consider it to be honey, and a luxury only, never surmising it to be a consummate substitute for all the other sweets, and are surprised when informed of the fact that it is equally as good, and will go just as far as sugar in cooking.

The objection might be brought to bear that honey is liquid, and consequently not so pleasant to get along with as a dry material. Why this property should be an objection rather than an advantage, I fail to see, unless it is in carrying a jug of it on the street; but in such a case very much would depend—whether its liquidity is an objection or not, we must go around it one way or the other, and if it should chance to be the other, we will arrange strainers in the bottoms of our honey barrels, drain the liquid portion out, and get it there in the shape of sugar. This plan was tried the past season, and it was found that granulated extracted honey when drained dry, sells well and gives satisfaction. I would suggest that when we will need to do this will be when there is enough honey produced to make it an object, and when the time is ripe for it. I say when the time is ripe for it, because I believe it to be with bee-keeping as it is with other kinds of business, that when it has been carried on in its present advanced state long enough so that people have become acquainted with it as an ordinary industry, and not filled with exaggerations and wonders, then will honey be inquired for, not as a curiosity and expensive luxury, but in a general way and as an ordinary article of food. That will be the time to work up a wholesale trade in our home markets.

As has been said before, bee-keepers can do themselves no greater favor than to let the adulteration of honey take care of itself, except in the contradiction of false statements. It is displeasing, if nothing more, to behold the consumption, wholesale and retail, of materials whose whole make-up are well known to be pure and unadulterated frauds; and then the upbraiding of a whole industry accusing it of being connected with fraud in very rare or incapable instances, all because it is respectable and a newcomer! This is like "straining at a gnat and swallowing a camel."

The guarantee which I offer, that my honey is pure, is to label the packages PURE HONEY; but when accosted with the comparatively consoling news that honey is adulterated, I inquire what it is adulterated with; tell them to inquire of my neighbors, or invite them to act in their own favor by coming to the apiary and profit by what they will see with their own eyes. One day last June, a farmer, living some 18 miles distant, on the road to market chanced to stop at my place for a drink of water, and on speaking of the bees and honey, I took him to the extracting-room and showed him how it is done. Expressing great surprise at what he had learned, he went on to market and returned with a large crock which he carried home filled with honey. During the fall and winter many a crock of honey went out to the friends and neighbors of this farmer where honey had scarcely ever been used before.

Last fall a customer from that neighborhood told me that those who saw the honey could hardly believe it to be pure, but as their neighbor was here and saw it taken from the combs, they concluded that it must be so. Instances of this kind show that the words of one uninterested person is worth more as a recommendation than all the arguments that might be produced by interested parties; and that extracting honey at Fairs is a capital way to advertise the business.

The great obstacle which lies in the way of our progress toward the introduction of our product is, that ordinary minds are incapable of thoroughly comprehending such sudden advancements as apiculture has brought out. We know how difficult it was to bring into use steam, sewing-machines, and certain agricultural machinery; those who performed the labor of introducing, declare that a generation had to be raised before they were successful. To a large extent this is true of the Langstroth frame. It is my opinion that we may advertise, talk and write all we please about the good properties of honey, and the bad effects of glucose, and the two methods of offering our honey will still remain—either as a high-priced luxury on a continually glutted market, or as a corresponding-priced substitute for sugar. Which method is preferable?

Bradford, ♂ Iowa.

For the American Bee Journal.

Lengthening the Swarming Impulse.

J. E. POND, JR.

On page 86 Mr. Doolittle complains that some were uncourteous in the replies to Query, No. 173. Mr. D. has been so long and so well known to all as an honest, upright man, that no one would intimate or even suspect that he had indulged in "the tricks of the trade" in order to impose on any one. He also gives his views in regard to the swarming impulse, and explains his method of queen-rearing, claiming that it is superior to that of those who rear queens "artificially." I fail to see the difference, however; in fact, it appears to me that his method is practically the same as those he condemns.

What is the swarming impulse? Does it or does it not differ from the queen-rearing impulse? In the correct answer to these questions will be found the correct theory of queen-rearing. That the two matters are alike in some respects is admitted; but I claim also that in some respects they are widely different. The "swarming impulse" is the desire of the bees to "multiply and replenish the earth." This, however, can be done to as good advantage by bringing the reason of man to the aid of the bees, and thus prevent swarming entirely. The queen-rearing impulse is the natural desire of the bees to preserve and perpetuate their individual existence as a colony.

In what respect does Mr. D's method differ practically from that of our most successful queen-breeders? In the one case Mr. D. forces his colonies up to the strongest position in point of numbers that he possibly can, and then allows them to swarm; the others force theirs up to the same point and then remove the queen. This, however, is not the whole. Mr. D. allows his colonies to rear queens as they may choose, thus running the chance of getting many from aged larvæ; the others, when they remove the queen, remove all brood that could be used to rear queens from, and continue so removing until all the residue is too old to be so used. Then all queen-cells are removed, and eggs—fresh eggs—are given the colonies. Now these colonies are as strong as they can be made. If honey is not being gathered freely, they are fed to keep up the illusion, and the desire to rear a queen for the purpose of perpetuating the colony is equally as strong as the swarming impulse; why, then, should the results in the one case be so much better than in the other?

No one would pretend to say that Mr. Doolittle would use the idea of "swarming impulse" for purposes of deception. It is a fact, though, that some do so use it, and such being the case, I do not see anything "uncharitable or uncourteous" in the replies adverted too. The real fact is that in bee-keeping matters there has always been a large amount of mystery, and theories more or less plausible have been accepted in the past as proven facts; so long as such is the case, just so long will the door to fraud be left open. Let us all indulge in the hope that facts, and not theories, will be the rule of the future, and that every man will be judged for what he does, and not by any general standard.

Foxboro,⊶ Mass.

For the American Bee Journal.

Who Should Keep Bees?

MRS. L. HARRISON.

On page 23 Mr. Otis N. Baldwin says: "During the year 1883 bees did well here, as was universally the case. This is what I call a bad streak of good luck, or *vice versa*, for it gave everybody the bee-fever—the old men, the boys, the cripples, the old maids, and even the hired girls in this section entered upon the uncertain sea of apiculture."

"The old men:" God bless 'em. I once had a dear old father, and a grandfather, too; the idea of any one begrudging them the comfort of keeping bees in their old age!

"The boys:" Friend Otis, thee was a boy once; thee might be called over the "dark river" to hive bees in another clime, and would it not be well to have them learn to care for bees? When thou art gone, Northeastern Missouri will be their territory, and they will not be infringing on thy rights.

"The cripples:" I know a house-builder who became crippled so that he could not climb upon buildings any more; he must live as well as you and I, and he engaged in bee-keeping. He has limped among his hives to good advantage, and sends to this market beautiful honey, and if I should meet him to-day I would grasp him warmly by the hand, and say: "My brother bee-keeper, although you live 20 miles from Peoria, you are welcome to this honey market, as far as I'm concerned."

"The old maids:" True, their cats *might* follow them into the apiary and get stung, yet I know some ladies "of uncertain age" in the State of Michigan who have made a grand success of keeping bees, and I hope that the "old maids" of Northeastern Missouri will succeed just as well.

"The hired girls:" That hired girls are keeping bees is the choicest bit of news I've heard in many a year, and I roll it "as a sweet morsel under my tongue." They have gotten up from their knees, and left their scrubbing-brushes, and stove-blacking, and stand erect in their apiaries. When attending the bee-convention at Detroit, I roomed with a "hired girl"—a neat, intelligent girl (not an old maid), who had done house-work in order to earn money to purchase bees. She had a nice little apiary, and was then working, and obtained leave of absence for a few days to attend the convention. I won't tell her name, for fear some lazy man might think she would be a good investment.

I want women to keep bees, or, as Mr. B. says, "enter upon the uncertain sea of apiculture;" but I do not want them to crowd out the men. I know that we take up considerable room, and we are noisy, too, always putting in a word, but we will try to keep "on our good behavior."

Peoria,⊙ Ills.

For the American Bee Journal.

The New Reversible Hive.

G. M. ALVES.

In a recent article I propounded several questions concerning the construction of the new Heddon hive. Mr. Furness has given us his answers to the questions, and as it seems that he has somewhat misunderstood the purpose of them, I take this opportunity to explain.

In asking the questions I directly stated that I did so without offering answers myself. Serious doubts arose in my mind, in reading Mr. Heddon's book, as to some of the details of construction, and it would have been manifestly unreasonable for one, from experiments carried on for a short time, and only within the chambers of his own mind, to pit his conclusions against those of men who had carried on their experiments for the last year or two in outward fact. Hence the questions were intended to raise the points, and not to decide them.

I thought then, and still think now, that at least some of these points should be met by Mr. Heddon or some one else who has tested the hive; and I now ask Mr. Heddon, has he had no trouble in making and keeping the frames of the precise width? Has he not been troubled with expansion and contraction? and has not the accumulation of propolis given him trouble at the tops of the frames where they touch, or nearly touch the front and rear of the case, and also at the joints made by the frame, on the thumb-screws' side, with the front and rear of the case?

It is to be understood that an impediment longitudinally of only 1-16 of an inch will prevent the replacing of a frame, and that an expansion of or an accretion to each frame of 1-32 of an inch will take up all of his spare room. Let Mr. Heddon please tell us to what extent these objections are founded in fact, and to what extent in imagination.

I will state here, and probably it would have been better to have stated it in my former article, that Mr. Heddon's system seems to me in many respects excellent, and if there are real objections in his present details of construction, I have sufficient faith in his inventive genius to believe that he will succeed in removing them.

But I am necessitated to explain further. Mr. Furness, after having been pleased to mention my preliminary remarks as of literary merit, etc., intimates that I am very non-progressive. Now it is somewhat embarrassing to have attempted to say funny things, and then feel called upon to explain them. The fact was, Mr. Heddon's new hive was ushered into bee-literature with such a flourish of trumpets, and at the same time Mr. Heddon had so wonderfully crossed his old records, that some of us could not but laugh for the fun of the thing.

However, the subject has now assumed an aspect not to be laughed at. The question has been raised, is the Heddon patent valid? We are now called upon to consider the rights of a man to property claimed by him. It is probably unnecessary to say here that I am no champion of Mr. Heddon's, appointed or self-constituted, but surely all fair men should ever be ready to champion fair play, it matters not whose interests are involved.

I have never seen Mr. Heddon's specifications for his patent, but it requires little intelligence to know that the spirit of his claims includes not only his several precise details of construction, but that it also includes a combination of these details into his special system, and all kindred details that have for their end the carrying out of his particular system. I lay down the above as a proposition that no man will deny who can think connectedly.

The question, then, is not merely whether all of Mr. Heddon's details are novel, but the question also is, whether the combination of these details into his peculiar system is novel. I affirm that the Heddon principles *are* novel—that they cannot be found in literature or elsewhere. Let those who deny, adduce the proof. The rubbish that has already been lugged forward does not deserve a critical man's attention.

In the meantime these questions are pertinent: If Mr. Heddon's ideas are not novel, how happens it, that a system which seems to promise so much, has not before this become familiar? How happens it, that authoritatively informed men respect the novelty of the system?

I wish to enter a protest here against the loose notions some bee-keepers seem to have about the patents of their fellows. As long as the laws of our country allow men the privilege of patenting their inventions, there can be no good reason shown why inventors of bee-keeping appliances should not be allowed the same right; and a bee-keeper who knowingly uses the property—*i. e.*, patent—of another without legally acquiring that right, cannot be called honest; and the fact that he can appropriate it without the knowledge of the owner, would, if so done, only give additional contempt to the theft. Should an inventor ask me more for the right to use his patent than I was willing to give, I would content myself without it, just as I would content myself without his horse or cow, should he ask me more than I was willing to pay. It would seem that there are some in this regard, where their business ethics fall short they seek to eke them out with sentimental drivel and religious cant. Let us all try to be simply honest; then if there are any among us who have a superabundance of sentiment, the balance of us can, with some show of patience, listen to its gurglings.

Henderson, Ky.

For the American Bee Journal.

Comb Honey vs. Extracted Honey.

CHAS. DADANT.

In quoting the figures of the report of Mr. Doolittle, as given on page 709 of the AMERICAN BEE JOURNAL for 1885, I could not imagine that Mr. Doolittle had not given all the facts as they were. I could not suppose that the 2 colonies which he credited as having given 388 pounds of extracted honey, had produced 338 pounds only, of *partly poor honey*. I could not suppose that he had impoverished his best colonies by taking brood to rear a great many queens, since he did not figure the proceeds of these queens in his report, as he usually does every year. If I have supposed that his colonies were weak for winter, it is because he manages his bees to have light population in the fall. (See his article on "Those Six-Frame Hives," in the BEE JOURNAL for Jan. 30, 1884.)

It is not my intention to contest the figures given anew on his report, but I will prove that the bees worked for acted honey give nearly twice as much honey as those worked for comb honey; that the production of comb honey costs more money and more work than the extracted; and I will again look for my proofs in the writings of Mr. Doolittle, in spite of my chances of having the figures corrected again.

In the *Gleanings* for October, 1877, Mr. Doolittle said that 2 colonies worked for extracted honey gave 446 pounds each, while the colonies worked for comb gave an average of 158 pounds. If we deduct one-fourth of the 446 pounds, on account of the evaporation of this honey, which was not altogether ripened, since it was extracted when the bees begun to seal over the cells at the top of the combs (*Gleanings*, 1878, page 12), we have 334 ponnds of extracted honey against 158 pounds of comb honey—more than twice as much.

Mr. Doolittle denies now that the production of extracted honey requires less work than comb honey. We find in the *Gleanings* for December, 1877, page 335, that he works from early dawn till late at night, averaging about 15 hours work each day, yet he had only 80 colonies. If some desire to know how Mr. Doolittle works his bees, let them peruse the article entitled "Those Six-Frame hives," referred to above. According to our experience, a bee-keeper working for extracted honey can manage at least four times as many hives as does Mr. Doolittle, and without working more than ten hours per day. But we will need some help about three times in the year.

As to the expense: If we work for extracted honey, the same combs are used indefinitely. When, after having been emptied, they are given back to the bees to be dried, they contain yet about 3 per cent of honey; besides, the cappings give about 1½ per cent. of beeswax, and some honey; these returns pay for all the expenses of extracting and buying the barrels.

It is quite the reverse with producing comb honey. We have to buy the sections, the foundation; have to furnish the glassed boxes for shipping, etc., and not a cent of return; not even the guarantee that our well-cared-for sections will reach the grocer unbroken. But Mr. Doolittle, himself, complains of such expenses, for he wrote in *Gleanings*, for Oct. 15, 1884, that the nicest honey in a one-pound section without glass means nearly six times the labor and expense to the bee-keeper that 6 pounds of honey meant 12 years ago. After this quotation I have nothing to add, letting the reader draw the conclusions.

Hamilton, Ills.

Convention Notices.

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m. M. E. DARBY, *Sec.*

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.

B. F. CARROLL, *Sec.*

For the American Bee Journal.

Bee-Keeping in Northwestern Iowa.

J. C. WHEELER.

I came to this place from Kendall County, Ills., on March 1, 1884, bringing with me 20 colonies of Italian bees. They had been stored in the cellar during the winter, and the weather being so severe they were not out for a flight before being shipped. I use Langstroth hives, and to prepare for the journey I covered the entrances with wire-cloth, bored an inch hole at the top of each hive in the front end (covering them also with the wire-cloth), and nailed the bottom-boards on. The hives were then packed snugly in one end of the car, standing with the ends of the hives toward ends of the car.

After the journey of five days (500 miles), it being still too cold for them too fly, they were packed as follows: The hives were placed on the ground in a row close together, and covered with wheat chaff and straw in the shape of a long straw-stack about 4 feet wide. The chaff was kept from the entrances by a 20-inch board placed horizontally one inch above the alighting-board. The first suitable day, being fully three weeks after arriving, they were uncovered and had a good flight, and all were in seemingly good condition, except one colony that had died from lack of honey.

Last winter, and also this winter, I have wintered my bees similarly to the description of the protection that I gave them the first spring, and I like it very well; but I would prefer a good, dry cellar.

People said that bees could not make a living in this part of the country, but I still have my 20 hives full of bees and honey, and last season I took 1,000 pounds of honey from them as a surplus. White clover is scarce, but wherever started it does well. I think that in a few years we will have plenty of clover honey. The first season that I was here I put out 500 linden trees, and each year I have sown buckwheat from which the bees stored much honey. Very late in the fall they work on goldenrod and resin-weed. A neighbor has a large patch of sweet clover in his door-yard, which proves that it is at home here as well as elsewhere. I will sow five acres of it this spring. There are no bees nearer than 8 miles away, and but 2 or 3 colonies there.

The first year, my queens being young, I found it necessary to replace only those dying with about half a dozen new ones, and these became fertile without any apparent inconvenience. I supposed that they were fertilized by my own drones, but several of them produced hybrids, so I concluded that there must have been black bees nearer than I knew of. Last summer, with every hive in the apiary containing drones, fully two-thirds of fifty young queens that were hatched and could fly, refused to become fertile. I know they could fly, for I noticed them leave the hive many times. I can account for this in no other way than that the colony or colonies of bees from which my queens had been fertilized the previous year, had been winter-killed or moved farther away; and that there must be a point not yet understood perfectly, that either the queen does not fly away from home to meet its mate, and the drone does, or *vice versa*. There are but few in the United States so situated as to test this question fully. I should like to hear the experience of others on this point, through the BEE JOURNAL. I will test it more carefully another season.

Oyens, ☌ Iowa.

For the American Bee Journal.

When to Put Bees into Cellars.

T. F. BINGHAM.

On page 739 of the AMERICAN BEE JOURNAL for 1885, Mrs. Harrison states that November is too early to put bees into cellars, etc., according to a vote at the Northwestern Convention. Further, she states: "Last year ours were stored on Dec. 1, and fine weather followed, when bees on summer stands flew for many days." Also: "Experience teaches us that it is better to store them late," etc. Will Mrs. H. please say whether her early-stored bees came out as well in the spring as others in her vicinity not stored so early?

The experiments reported, and theories deduced from them, are of very little weight in the minds of bee-keepers, if the fact is not well established that bees do not need to fly for an almost indefinite and unlimited time, unless exposed to cold the equivalent of freezing water. If such is the fact, and reports have been made from year to year, which, if reports are of value, settles that one point at least beyond controversy.

I will say that, so far as my personal experience goes, bees never winter well in depositories unless stored early—before cold, freezing days come on. If freezing cold is all that renders it important that bees should fly, no one can fail to see that late storing, for the purpose of allowing the bees one more flight, is a deception, and, as such, to be avoided. I will say here, and if time should demonstrate that I am mistaken, my object in this article will be accomplished just as well as if it should confirm my assertion, viz: that bees do not fly—in the sense of a spring cleansing flight—until after a few freezing days and nights in November or December, even if left on the summer stands and such moderate days occur as would induce an entire apiary to take wing in February or March.

While I shall not say that this is testimony proving that cold, below freezing, is the cause of the desire of bees to cleanse themselves, I shall offer this fact as evidence that the necessity is not urgent unless such cold has existed.

Mr. Editor, I trust you will not consign this short article to the yawning "waste basket," that is always so handy, because the subject is one at this time not much discussed; but allow it to go forth that we may learn whether bees are wintered on theory, more or less superficial and deceptive, or whether actual experience upon which one may depend lies within the reach of bee-keepers. If 1,000 bee-keepers should report that their bees were carried in after frosty days and nights, as a rule—in order to give them one more chance for flight—and that the bees of 900 of those bee-keepers, so housed, died just the same as those left all winter on the summer stands, the reports would be of value. If, on the contrary, 1,000 apiarists should report that by mere accident, fearing cold and inconvenient housing, they had taken their bees in 2 or 3 weeks sooner than was advisable or necessary, as the weather had unexpectedly turned, should winter their bees without material loss—much better even than those around them who had wintered theirs on the summer stands—their reports would be of value.

Can we not have such reports, short and without theory, sent to the AMERICAN BEE JOURNAL of last winter's inning, and of last clover season's inning? This question does not embrace the honey crop or "ifs" or "buts," or anything else, except the innings to the depository and those ready for the clover honey crop following.

Abronia, ♀ Mich.

For the American Bee Journal.

New System of Bee-Culture.

FRANK A. EATON.

The Heddon new system demoralizes everything heretofore used—hive, section-cases, frames, and dies for pressing foundation into wired frames with the Given Press. If any one but a leader, as Mr. Heddon is, had invented such an arrangement, it would either never be noticed or be laughed to ridicule. If I am right, he goes back on every part of his old system. I suppose he will have no more use for wiring frames, as the frames are so shallow that they will need no support. Then think of two bars of wood and a bee-space in the centre of the brood-nest, closed end-bars to the frames fitting close to the ends of the hive! Why, I would about as soon think of going back to the box-hive! If he wants to run parts of his colonies for extracting he will have to use those shallow frames or have two sizes of frames, which cannot be interchanged—a point which is so advantageous in extracting; and then, again, going back to wide-frames and separators for the surplus—I should not be more surprised if Mr. Heddon would declare there was nothing in the pollen theory for wintering, but say that it is hibernation that we want; then I think he would be nearer the right track on wintering, too. I hope that I am all wrong, and that Mr. Heddon has added another step in bee-keeping.

Bluffton, ⊸ O.

[As Mr. Eaton makes very sweeping assertions about Mr. Heddon's "new system," we think it but *just* that the latter should state his own views on the matter, so we sent him a proof of Mr. Eaton's letter with a request for a short reply, and here is what he says:—ED.]

In responding to your request, I will say that I hardly know what Mr. Eaton means by "demoralizes." My new hive and system aims to bring about many of the same results realized from the use of the old hive with very much less friction and outlay of time; not only this, but other and better results. It has "section-cases," though of a new style; its frames are as well adapted to the Given press as any other. I think that Mr. E. pays me a compliment that I do not deserve, for I do not think that those whose names appear in my advertising column "sneeze because I take snuff." Evidently Mr. Eaton is too hasty. Had he read the chapter on the new hive in my book, he would see that I wire the frames, and that the new hive is eminently adapted to contracting and reversing, and that the shallow cases are excellent for extracting, as advised in Dadants' excellent pamphlet, and practiced by many for a dozen years or more. The new hive does not *necessitate* the use of wide frames or separators. Should I find the "pollen theory" incorrect, I would so "declare" it as soon as possible. I think that if Mr. Eaton had tested the principles of my new hive and system for two seasons, as I and others have done, the unanimity of belief in its superiority would still remain. While I think that Mr. E. is too hasty and unwarranted in his judgment, his criticism is refreshing, compared with the reviews of those who, having theoretically discovered its advantages, arise and claim them for themselves. Regarding the merits of the hive, they will prove themselves. As to my rights as the inventor, I have little fear but that the fraternity will stand by me.—JAMES HEDDON.

Convention Notices.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The next meeting of the Patsalaga Bee-Keepers' Association will be held at Arcadia, Ala., on March 20, 1886. M. G. RUSHTON, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Kansas City, Mo., on Apr. 29 and 30, 1886. It is desired that this meeting shall be better than any of its predecessors. Essays will be read on the leading subjects in bee-culture, which will be announced as soon as arrangements are completed. Let all who have bees, queens, fixtures, etc., bring them if possible. Due notice will be given in regard to a hall. P. BALDWIN, *Sec.*

Local Convention Directory.

1886. *Time and place of Meeting.*

Mar. 20.—Patsalaga, at Arcadia, Ala.
M. G. Rushto , Sec., Raif Branch, Ala.

Apr. 7.—Wabash County, at Wabash, Ind.
J. J. Martin, Sec., N. Manchester, Ind.

Apr. 8.—Southern Illinois, at Duquoin, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Cold and Stormy Weather.—G. M. Doolittle, Borodino,⊙N. Y., on March 4, 1886, says:

The past week has been extremely cold and blustering here; in fact, about as rough a week as we ever get. The mercury was from 5° above to 10° below zero.

Cleansing Foul-Broody Hives and Combs.—Frank Curl, Des Moines,⊙ Iowa, writes:

On page 139, Mr. Ward says that by the use of lye he has disinfected both combs and hives which were infected with foul brood, and advises others to try the plan. As Mr. Ward does not state when he made his discovery, I would suggest that others wait until they hear from him next spring, when he may have a chance to make more experiments.

Bad Weather for White Clover.—Geo. Spitler, Mosiertown,↖○ Pa., on March 1, 1886, writes:

We are having zero weather without snow. Our bees had a chance to fly in February, but all the colonies did not come out, yet all seemed to be in good condition. The present weather will be hard on white clover. Bee-keepers are fearing losses on account of their colonies being short of stores.

Bees all Alive.—H. Clark, Palmyra, ♀Iowa, on March 4, 1886, says:

My bees generally bring in the first pollen from April 1 to the 15th. So far I have not lost a colony this winter, although the most of them are packed out-of-doors in 8-frame Langstroth hives. I am satisfied that our loss of bees in wintering is caused by having bad honey for stores. Last spring 90 per cent. of the bees were dead here; while now they all appear to be all right. On Feb. 4 it was 30° below zero.

A Bee-Keepers' Meeting.—Mark Thomson, Canton,♂ O., writes as follows:

The bee-keepers of Stark County met in Grange Hall, at Canton, O., on March 2, 1886, and effected a temporary organization by electing Jacob Oswalt, of Maximo, President; J. H. Smith, of Canton, Vice-President; and Mark Thomson, of Canton, Secretary and Treasurer. A meeting for the purpose of effecting a permanent organization was called for Tuesday, April 13, 1886. The afternoon was spent in a general experience meeting, participated in by all the members present. Much interest was manifested, and great good to the cause promises to result from the organization.

Sectional-Hive Questions.—J. R. desires the following queries answered:

1. When hives are made with square joints between sectional parts, is there no danger of water running in from rains to the injury of the bees? and does it not take more time to adjust or manipulate them than those having lock-joints? 2. What is the right space between frame end-bar and the hive? Is ⅜ of an inch not inconvenient to the bees, that is, too long a step, as it were, from hive to frame? 3. How much play should the top-bar have endwise?

[1. Long experience declares "no," for both parts of the query.

2. I prefer the standard ⅜ of an inch for suspended frames. It makes the bees no trouble, but will trouble the operator if less space is used. I would use an inch but for brace-combs.

3. Just enough so that notwithstanding the variations in the lengths of the top-bars, all will go in and out without wedging. The more accurate the work the less allowance needed.—James Heddon.]

Disinfecting Foul-Broody Hives.—Dr. L. C. Whiting, East Saginaw,⊙ Mich., on March 4, 1886, writes:

Mr. G. J. Pease, on page 137, wishes to know how to clean his hives and roof from foul brood. Heat applied to the hives in some way, equal to the boiling point, is all that is required. If the hives are loose from the bottom-boards, build a fire in an old iron vessel of some kind, and make a chimney of them by piling them up one on top of another, and when the wax on the inside is melted and runs down, throw in a handful of sulphur, and place one of the bottom-boards on top to keep in the vapor. In 5 minutes the hives will be as safe as new ones. Treat the bottom-boards and frames to the same heat, melt the combs into wax, and scald the honey and feed it to the bees in the summer when no honey is coming in. If it is fed without heating, it will spread the foul brood to all the colonies fed. If his neighbor's bees get any of this honey before it is scalded, they will have the disease and pass it back to Mr. P's bees by the time they are well started again. So he will see the importance of using *great care* in all the manipulations. The roof, if painted, is safe, and I think that it would be without.

Short of Stores.—J. A. Pearce, Grand Rapids,←○ Mich., propounds these questions:

1. Is there any way to tell that a colony of bees in the cellar are getting out of stores by the actions of the bees or otherwise? 2. What is the best time of day to put bees out of the cellar?

[1. We know of no better way than to look into the hive to find out whether the bees have enough food.

2. When everything seems favorable for a flight *at once*, put the bees out, contract the entrances to the hives, and smoke the bees a little to prevent any great rush from the hives.—Ed.]

Condition of Bees in Virginia.—Jos. E. Shaver, North River,♂ Va., on March 3, 1886, writes:

About half of the bees in this county are dead. The loss was caused by the very poor honey season last summer, this extremely cold winter, and the negligence of some bee-keepers. As there was but little honey gathered last season, some bee-keepers gave their bees no attention, and hence their loss. My 25 colonies have wintered nicely thus far. I have them on the summer stands with enameled cloth and cushions on the brood-frames, and corn fodder packed all around the hives, except at the entrances. Most of my queens have commenced laying, although the weather is still quite cold.

Cider and Bees.—R. K. McCune, Fair Water,○→ Wis., on March 1, 1886, writes:

We occasionally see articles in the bee-papers hinting that honey and bees are damaged by pomace at cider-mills. It is true that bees sip at fruit, but it does not necessarily follow that they are gathering it to put among their stores, or even extracting honey from it. We see them in the same way frequenting barn-yards and hog-pens, but no one would for a moment suppose that they were gathering anything to store in their hives. Again, it is frequently said that bees must have salt. Do bees salt their honey? All will say no. Then, I say, neither do they cider it. It may be asked, what do they do with those ingredients? It is a known fact that many kinds of animals and fowls do at times use substances foreign to their natural food, as medicine. Why should not bees use all such things in the same way? For the past 8 years I have run a large cider-mill every alternate year, and have thrown out tons of pomace within a few rods of my bee-yard in which I had not less than 50, and from that to 120 colonies, and I have never seen any injurious effects upon either bees or honey. While we censure fruit-men for ignorantly condemning bees, let us not do the same thing by ignorantly condemning cider-makers.

Valuable for Reference.—W. E. Clark, Oriskany,⊙ N. Y., writes:

I desire to state that I think the bee-keepers of America owe the editor of the Bee Journal a vote of thanks for compiling the Convention History and publishing it in such a nice pamphlet. Its value as a reference and record is beyond estimating.

Bees Wintering Well.—B. W. Peck, Richmond Centre,♂ O., on March 4, 1886, says:

In the fall of 1884 I had 24 colonies; in the spring of 1885, 12; and in the fall of 1885, 34. I sold 4 colonies, so I now have 30, 25 being packed on the summer stands, and are wintering well, and 5 being in a clamp. Last season I took 676 pounds of extracted honey and 66 pounds of comb honey. It was my poorest season since I have been keeping bees. The Bee Journal grows better every year, and I shall not keep bees without it.

Queen-Excluding Honey-Boards.—C. E. Boyer, of Ainger,⊸ O., writes:

I notice that Dr. Tinker claims the original invention in making the Heddon slat-honey-board to be queen-excluding, by inserting sliding strips of perforated zinc into their saw-cuts in the edges of the slats. While I do not doubt its being original with the Doctor, I wish to state that I know that the device was also original with Mr. Heddon and myself. I was one of his students last summer; not an hour after I thought of the plan, he came and proposed it to me, and afterwards received a letter from W. Z. Hutchinson proposing the same thing. But Dr. Tinker freely gives it to the public, as Mr. Heddon and many others have done with similar devices.

Foul-Broody Hives and Fixtures.—Rufus E. Holmes, (22-24), West Winsted,⊸ Conn., on March 6, 1886, writes thus:

On page 137, Mr. G. J. Pease wants to know how to cleanse foul-broody hives, etc. I have had all the experience I want. There is no foul brood on his tin-roofs. The sun and rains will take care of all that, and hives and fixtures. Clean the brood-frames by scraping them with a knife or glass thoroughly. Do not try to save any comb, but turn it into wax. Wash thoroughly the hives inside and out, and all the frames and boxes which you wish to use again, with carbolic soap-suds, as hot as you can comfortably use. Then expose them to the sun and air. Do not feed any of the old honey or let it get where bees can get at it. Foul brood is perpetuated in honey. Honey from a foul-broody colony fed to a healthy one will nearly always inoculate the healthy colony. The old honey will make good vinegar. I have tried both the "Cheshire" and the "starvation" plan of curing foul brood. It is not necessary to destroy the bees. I prefer the "starvation" plan.

Do Bees Hear?—Elias Fox, Hillsborough,⊸ Wis., on Feb. 26, 1886, writes:

On reading Mr. Osburn's article on bees hearing, on page 120, I was amused at the evidence which he produces. He says that if bees do not hear, how do they communicate so quickly? My opinion is that they scent the formic acid or bee-poison produced by the sting. His statement does not show in the least that they *do* hear; neither have I ever read or heard any that did. I do not claim to know that they do not hear, but I would like to see some proof. I would like to ask Mr. O. why bees do not notice a loud noise around their hives, which we all know they do not, but will arouse at the slightest jar, or offensive or inoffensive odor. Let one bee sting you and the others will follow the smell and be more liable to sting as long as the scent lasts. Let one fasten itself in your veil in an attempt to sting you, and if you pinch it with your fingers you will find a dozen or more dart at the same place, after the first one is dead. I would like to hear from others on this subject.

A Chip.—W. Z. Hutchinson, Rogersville,♂ Mich., writes:

Please allow me to thank Dr. Miller for his very timely article on page 132. Also, please allow me to explain that *I* was not "putting a chip on my shoulder," but was knocking one off of the shoulder of another. (See the closing paragraph of the first article on page 6.)

Hibernation of Bees.—W. Z. Hutchinson, Rogersville,♂ Mich., on March 1, 1886, says:

Last fall I piled up in my shop 20 Heddon cases of honey just as they came from the hives. They were uncovered, and remained undisturbed until the last of December, when they were taken into a warm room preparatory to crating the honey. The honey was in the warm room three days before the work of crating commenced. When crating it, a few straggling bees were found, sometimes singly, and sometimes in little knots. All the bees were dead; not so, however, with the few wasps, hornets, and flies that had found their way into the cases. They were slow in their movements, but were alive; and in time became quite lively. *They* had been *hibernating*. Bees never enter this state, and must have food and warmth or they perish. They become quiet, it is true, but they do not hibernate. As Prof. Cook very appropriately says, we need this stronger term to describe a different phenomenon.

Bee-Keeping in Arkansas.—Frank Thiaville, Forrest City,⊸ Ark., on Feb. 27, 1886, writes:

The season of 1885 was an average one here. We had at least 70 pounds of extracted honey or 35 pounds of comb honey per colony. In June and July we had some honey-dew that spoiled our honey. From 103 colonies I obtained 3 natural swarms. The fall weather was fine. On Jan. 7 it turned cool, and for one month the temperature was sometimes as low as 8° below zero. On Feb. 8 the bees had a good flight, and a great many were lost on the snow. For several rods around the apiary it looked as if a yellow rain had fallen. They spotted the snow very badly, probably having eaten too much pollen. In 106 colonies I had only one queenless colony. I have lost none so far. Bees at present are doing well, and are breeding very fast. The honey market is dull here, extracted honey bringing 4 cents per pound, and comb honey 8 cents. A great many bee-keepers have lost their bees. They say that they froze, but that is a mistake, for bees never freeze here until all the honey has been eaten.

Good Weather for Bees.—John Rey, East Saginaw,⊙ Mich., on March 5, 1886, writes:

It is four weeks since the bees had a flight, and they are now having another good time. The snow is all gone, and the weather is fine—just right for bees. I think that they will pull through all right now. My bees are bright and healthy so far. I have 68 very strong colonies, but I will not "count my chickens before they are hatched," for they may not be so strong in May.

Flights in Winter — Reversible Frames.—I. N. Boyles, Urbanna,⊸ Iowa, on Feb. 7, 1886, writes:

I notice that quite a number of bee-keepers have taken their bees out of the cellars for a flight. It has not yet been warm enough here for our bees to fly. There is about 4 or 5 inches of snow in my bee-yard, and it has snowed all day to-day, but it melted as fast as it fell. My bees are in the cellar yet, and some of them are affected with diarrhea. If they do not get a flight soon I fear that I will lose quite a number of them. Last season was not a very good one for honey in this part of the country. I hope that this year will be better. Much has been written about reversible frames. I think that the extra labor it would take to use them would more than over-balance the profit. I think that we would interrupt our bees more by using them than we do in the present management. In the honey season we would work to get all the good honey in the sections and then feed it back to them in the fall to winter on, or let them have the fall honey for winter stores, which would be the cause of their death, nine times out of ten. I want my bees to have good basswood and clover honey to winter on. Another objection I have to the reversible frames is this: If you will uncap the brood and notice, the young bees lie with their backs down; to reverse that frame is would throw them out of their natural position, to which I object.

Bees in Good Condition.—Geo. E. Hilton, Fremont,⟜ Mich., on March 6, 1886, says:

I have just finished looking over my 75 colonies in chaff hives, and I find them in A No. 1 condition, not a single one dead yet. A few were short of stores, which was supplied with combs of honey saved from last year's crop for that purpose. There is no sugar feeding in my apiaries. There was but very few signs of diarrhea, and as a rule there was plenty of bees and plenty of stores, and in many of the hives brood on three frames.

My Experience in Bee-Keeping.—D. A. Dimitry, Morgan City,♀ La., on March 1, 1886, writes:

Last spring I commenced with 3 colonies of pure Italian bees, and by purchase and increase I have now 50 colonies, 17 of which are Italians, as many more hybrids, and the balance black bees, which, by the way, have done as well as the rest. I work my apiary for extracted honey. Last August, from 30 colonies I took 54 gallons of beautiful white honey. I use 10 and 6 frame Simplicity hives, which, as you see, cover the two extremes; and I find that one does as well as the other, the smaller being my favorite, as it is easily managed. I lost one colony during the last cold wave, which was the coldest weather known here for the last 15 years. My apiary is located on Shell Island, about 20 miles southwest of Morgan City.

Bee-Keeping in Texas.—J. W. Rounsaville, Brandon,⊙ Texas, on March 1, 1886, writes:

On Nov. 10, 1885, I had 59 colonies of bees, a part of which was in fine condition. I wintered them on the summer stands with the hive-entrances to the south and east. I examined them on Feb. 27, and have taken off the honey-boxes, confined the bees to the brood-chamber, and out of 16 hives I took 544 pounds of honey. The brood-combs are well filled with brood in all stages. I found one bright, new queen-cell. As a common thing, many bee-men have lost bees, and some have lost heavily, for the want of information to handle them. If all bee-men would read the AMERICAN BEE JOURNAL they would save enough in one year from their bees to pay for several bee-papers for several years. I cannot see how any bee-man could attempt to handle bees without the advice of the prominent bee-keepers who write for the bee-papers. As long as I keep bees I shall consider the AMERICAN BEE JOURNAL one of the indispensable necessaries of bee-management.

Only One Colony Lost.—J. W. Clark, Clarksburg,⊙ Mo., on March 1, 1886, says:

My bees are wintering well so far as I can see. I have lost but one colony out of 76, and that starved with plenty of honey in the hive.

The New Hive and Manipulation.—E. E. Ewing, of Rising Sun,♂ Md., writes:

Mr. G. W. Demaree, on page 102, declares that there is not a single new feature connected with Mr. Heddon's "new patent hive." I believe that this is correct, but the peculiar combination of the *old* "features" makes something that has never been exactly made before, and that "something" (the hive) makes a manipulation possible that has never before been practiced in working an apiary. When all these results are put together, it seems to me that something which the world calls "new" has been created. We are utilizing the knowledge of the past by giving it new combinations, and constructing things that the world and our patent laws call new.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and City and Country	2 00	1 50
New York Independent	4 00	3 30
American Agriculturist	2 50	2 25
American Poultry Journal	2 25	1 75
Journal of Carp Culture	1 50	1 40
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Apiary Register—100 colonies	2 25	2 00
Dzierzon's Bee-Book (cloth)	3 00	2 00
Dzierzon's Bee-Book (paper)	2 50	2 00
Quinby's New Bee-Keeping	2 50	2 25
Langstroth's Standard Work	3 00	2 75
Root's A B C of Bee-Culture	2 25	2 10
Alley's Queen-Rearing	2 50	2 25
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Mar. 15, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Sales have been quite good this month for best grades of comb honey, some bringing 16c. per pound when in perfect order. There is a light supply here, and now is a favorable time to forward shipments. Extracted honey brings 6@8c.

BEESWAX.—25@26c. per lb.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We note an improvement of sales of honey the past week, but prices continue to rule low. We quote as follows: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.

BEESWAX.—27@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is no speculation whatever in the market, and the demand is slow for extracted honey from manufacturers, while it is fair for honey in glass jars, for table use. Demand for comb honey is slow and the market is well supplied with all kinds. Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—The home demand is good, while arrivals are slow. We pay 25@27c. for good yellow to choice.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—There is a great improvement in the demand of best 1-lb. sections since our last report, and all receipts are finding ready sale at 14 cents, with occasional sale of single crates at 15 cents. Two-lbs. are neglected, very little wanted at 13 cts. Old honey, 10@11 cts. and slow. Extracted, 7@8c.

BEESWAX.—Scarce at 25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales are improving and we have a good trade in comb, although prices are not as firm, owing to good prospects in California for a large crop having reduced their prices about 2 cts. We quote as follows: Choice comb in 1-lb. sections, 16c.; fair to dark, 12@14c.; in 2-lb. sections, 12@14 cents. Extracted is dull and slow. Dark brings 3 1-2 to 4c.; white, 6@7c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—The sale for honey for the past month has been as light as we have ever known it, and prices are weak. One-pound, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The market is very dull. We quote as follows: White and extra white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 23@25c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market continues dull and very few sales are reported. Best white in 1-lb. sections can be bought at 13 cts. per lb.

BEESWAX.—It is in good demand at 25@27c.

M. H. HUNT., Bell Branch, Mich.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so *cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

◆

Beeswax Wanted.—We are now paying **24** cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

◆

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for $1.30.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

Golden Rules for successful advertising, are these: 1. Attractive display. 2. Salient points clearly stated. 3. Repetition. Don't spend all your money in one insertion. 4. Choice of the Paper which reaches the people you want to reach. *These rules never fail.*

◆

Send in orders now for bees, queens, or bees by the pound. I have also a full line of Supplies. Address, F. J. Crowley, Batavia, N.Y.

◆

Dr. Tinker has sent us a sample of his new side-passage sections. They make a fine appearance; being smooth and accurately cut.

◆

Mr. J. H. Mason, of Mechanic Falls, Maine, has sent us a sample of a dovetailed one-pound poplar section, and a smoker, as made by him. Both are of good mechanical appearance.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office in parts. Price, $3.00.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

◆

Cash in Advance is the rule, but no longer than six months of grace can be allowed on the small sum of $1.00. Subscriptions may commence at any time, and discontinuances may be ordered at any time, when arrearages are paid up.

◆

Convention Notices.

☞ The bee-keepers of Manitowoc and adjoining counties will meet at Kiel, Wis., on March 25, 1886, for the purpose of organizing a bee-keepers' association. J. H. ROBERTS.

☞ The Wabash County Bee-Keepers' Association will meet at the Court House in Wabash, Ind., on Wednesday, Apr. 7, 1886, at 10 a.m. All bee-keepers are invited. J. J. MARTIN, *Sec.*

☞ The bee-keepers of Stark and adjoining counties are earnestly requested to meet at Grange Hall (over Farmer's Bank), Canton, O., on Tuesday, Apr. 13, 1886, for the purpose of effecting a permanent organization. MARK THOMSON, *Sec.*

☞ The Southern Illinois Bee-Keepers' Association will hold its 3d annual convention in Teague & Harris's Hall at Duquoin, Ills., on Thursday, Apr. 8, 1886, at 10 a.m. A general invitation is extended. F. H. KENNEDY, *Sec.*

Advertisements.

FOR SALE.—Italian and Cyprian Bees and Queens (in any quantity), Extractors, Bee-Books, etc. Address, OTTO KLEINOW,
11Atf (Opp. Ft. Wayne Gate), DETROIT, MICH.

PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
11Atf O. CLUTE, **Iowa City, Iowa.**

ANY ONE having choice Alsike clover seed for sale, please address, *with price,*
H. R. BOARDMAN,
11A1t EAST TOWNSEND, O.

RAYS OF LIGHT, the original Bee and Poultry Journal. Published in the interest of Bee-Keeping and Poultry Raising. J. J. MARTIN & CO., Publishers, North Manchester, Ind. Sample copy FREE. Subscription price **50 cents** *per year.* 11D8t

BEE Hives and Sections.—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

100 COLONIES
OF
ORANGE-COLORED ITALIANS
AND
WHITE-BANDED ALBINO BEES
FOR SALE.

THOSE in want of Bees, Queens, or Apiarian Supplies will do well to send for my 26th Annual Price-List before purchasing. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
COLERAINE, MASS.

N.B.—The best testimonial I can give, is that my trade has more than doubled in the past 3 years.
7Dtf

NEW ONE-POUND HONEY PAIL.

THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle, making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

MANUFACTORY
FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH ANE MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,
GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

6 Horse-Power
Portable Engine and Boiler
FOR SALE.

USED but little and it is in good condition. Reason for selling—I need more Power.

D. G. WEBSTER,
11A1t BLAINE, Boone Co., ILLS.

Vandervort Foundation Mill.
6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

30 COLONIES OF
ITALIAN BEES
FOR SALE,
In movable-frame Hives.
PRICE from $7 to $10,
according to the number ordered.
Dr. H. N. Rogers, Zumbro Falls, Minn.
11A3t

BOSS BEE-FEEDER.—Sample and full particulars for 30 cents.—For feeding inside of any hive, without disturbing the Bees.
T. C. WIRE,
11A3t GRINNELL, IOWA.

DOUBLE-WALLED

Langstroth Hives

FOR WINTERING BEES ON SUMMER STANDS.

THEY are made identical and interchangeable with our Standard Langstroth Hives, as advertised and described in our Catalogue. All upper stories and surplus arrangements made by us will fit this double-walled brood chamber. Prices: Nailed, **50c.**; in the flat, **35c.** per hive, in addition to our prices of the Standard Langstroth. We also make our 7½-inch Caps with a sloping or Cottage Roof, which is worth **20c.** nailed and **15c.** flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

AMERICAN APICULTURIST.

A 32-page magazine devoted to

PRACTICAL BEE-KEEPING.

Sent three months for 25 cents; six months for 50 cents, or one year for $1.00. We also deal in the best Hives, Sections, Smokers, Extractors, &c. Also Italian and Syrian Queens and their crosses. Other races furnished upon application.

Each new subscriber to the *Apiculturist* will receive a fine likeness of

L. L. Langstroth and the late Moses Quinby.

Send your address on a postal card for a sample copy and price-list of Apiarian Supplies, Queens, Bees and Nuclei. Address,

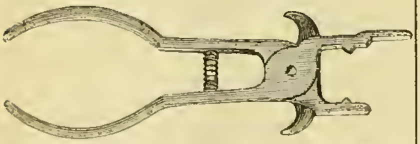
AMERICAN APICULTURIST,
9Dtf WENHAM, Essex Co., MASS.

DUNHAM AND VANDERVORT FOUNDATION.

WE have a large stock of choice yellow beeswax, and can furnish Dunham comb foundation for brood-comb, cut to any size for 42c. per lb. Extra thin Vandervort foundation, 48c. per lb. We guarantee our foundation to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20 cts. per lb. for sections.

F. W. HOLMES,
9Dtf COOPERSVILLE, Ottawa Co., MICH.

JONES' FRAME-PLYERS.



FOR taking frames out of hives, or moving them in any way desired. It is made of galvanized iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Plyers. Price, **40 cts.**, by mail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

1886. ITALIAN QUEENS. 1886.

FROM APRIL UNTIL OCTOBER.

UNTESTED, $1.00, per Dozen $8.00. Reared from Imported Mothers. Money refunded if not furnished promptly. Address,

WALTER McWILLIAMS,
9D6t GRIFFIN, GEORGIA.

Bee-Hives and Bee-Supplies,

QUEENS AND NUCLEI.

WE are now ready to fill all orders promptly, at low prices, and guarantee our goods. Send for Price-List free.

R. J. MILLER & CO.,
2D6t NAPPANEE, IND.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

HEDDON'S

COLUMN.

FOUNDATION

PRICES REDUCED.

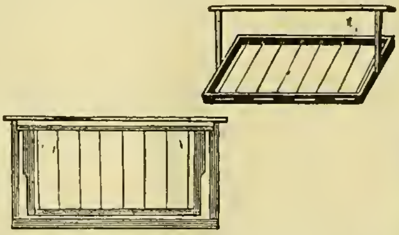
Given and Dadant Comb Foundation for the New Hive, and Langstroth and American frames, and surplus sections. Prices (by express or freight), and subject to change without notice.

FOR BROOD—	1 to 10	pounds,	per lb.	45c.
Do.	11 to 25	"	"	44c.
Do.	26 to 50	"	"	43c.
Do.	51 to 100	"	"	42c.

FOR SURPLUS—**10** cents per pound more.

My NEW Sectional-Brood-Chamber HIVE.

For prices, descriptions, etc., see advertisement on page 93. Two styles of surplus case with each hive.



Our suspended reversible frame, in the flat, and made up, wired; either empty or filled with foundation. Also, common Langstroth and American frames in the flat. For prices, see our Circular.

SECTIONS.

Smooth, white poplar, all dovetailed, 4¼x4¼ and 7 to the foot. Prices are as follows:

Boxes containing 1,000 sections, each, ...	$5 50
5 or more boxes, each, ...	5 25
10 " "	5 00
Boxes containing 500 sections, each, ...	3 00
5 or more boxes, each, ...	2 90
10 " "	2 75
Less than 500, of any size, per 100, ...	1 00

One-piece sections, same size and price.

BEES and QUEENS

No bee-keeper can show more or better testimonials than I. For prices and descriptions of races and strains, see our 1885 and 1886 Circulars. Ask for both.

THAT NICE HONEY

Is not yet all gone. For price, quality, style of package, etc., see my advertisement on page 64.

"SUCCESS in BEE-CULTURE."

In favor of the above-named book, and our New Hive, I have 30 testimonials from prominent bee-keepers, similar to those found in my column in Nos. 7, 8, 9 and 10, of this Volume. Price of Book, postpaid, 50 cents.

FOR DESCRIPTIONS and PRICES

of all the above; also, bee-veils, plated wire, honey-boards, nicest shipping-crates, honey-extractors, bee-feeders (3 styles), foundation fasteners, wire-imbedders, fruit and honey plants, Improved Langstroth hives, lamp-nursery, honey-registers, Bingham smokers and knives, etc., send address to

JAMES HEDDON,
Dowagiac, Mich.

THE VICTOR HIVE

IS pronounced by competent apiarists to be the Best Hive for comb honey. It is operated on a new principle, the passage-ways being continuous through perforated zinc to the sections. Our dovetailed White Poplar Sections, with or without side passages, cannot be excelled in accuracy or smoothness. They are as nearly perfect as can be made. Sample of the new sections for 2 one-cent stamps. Catalogue on application.

Address, **DR. G. L. TINKER,**
3Dtf NEW PHILADELPHIA, OHIO.

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.**, a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery. Send for Illustrated Catalogue. Address,

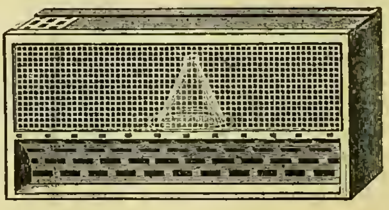
J. P. H. BROWN.
7D10t AUGUSTA, GEORGIA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

IXL EXTRACTORS.

FOR 2 Langstroth, American, or Gallup frames, with gate—**$6.50.** Machines for any size of frames made to order. **Cold-Blast Smokers,** postpaid, **$1.00.** **W. C. R. KEMP,**
7D4t ORLEANS, IND.

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

BROOD-FRAMES.—C. W. Dayton, Bradford, Iowa, will furnish first-class brood-frames of any size, at $1.00 per 100, ready to nail; and will take honey and beeswax in payment for the same.
7Dtf

1869. UP WITH THE TIMES. 1886

Armstrong's Perfection

CROWN HIVE.

The brood-frames, honey-rack, and section-boxes are all **Reversible.**

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.

Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.

1886. ALLEY'S 1886.

Combined Drone and Queen Trap.

A perfect non-swarming arrangement. Send and get them by the quantity, in the flat, and sell to your bee-keeping friends. Every bee-keeper will purchase one or more who examines them. Send for wholesale prices. Circulars free.

HENRY ALLEY & CO.,
51Dtf. Wenham, Essex Co., Mass.

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS of the **BRISTOL Bee-Hive,** the Standard Hive of Vermont, **Section Honey-Boxes,** all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers,** Shipping **Crates,** Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for Illustrated Catalogue and Price-List. 46D12t

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SEE SHUCK'S ADVERTISEMENT
IN ANOTHER COLUMN.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. March 24, 1886. No. 12.

Of the Eighteen Different Kinds of North Brazilian honey-bees known to the naturalist, only three possess a sting.

◆

Bulletin No. 11, of the Michigan Agricultural College, is received, and the subject matter is "Making a Lawn," by Prof. W. J. Beal.

◆

Nelson Perkins, formerly of Minnesota, but later of Alabama, died in the latter State very suddenly of a lung difficulty on the 10th inst., and was buried on the 11th inst. He was an experienced apiarist and an earnest Christian, and will be missed by his many companions.

◆

Bees in the Cellar should be left there for some time yet, or until they get uneasy, by reason of warm weather. If put out too soon a cold snap will be very disastrous, for many of the bees are old and have but little vitality. If they go out they soon become chilled and never return to the hive.

◆

We Request our correspondents to send us no more at present *pro* or *con* on the Heddon hive. The subject is occupying too much of our space, and subscribers are complaining of this preponderance. We have now on hand all we can use on that subject for months, and at the same time give the "variety" necessary in a well-conducted periodical.

◆

Everything that will be needed in the apiary should be at once provided, so that when the honey-flow comes there may not be any damaging delays in procuring it. Three years ago every supply dealer in the country was so crowded with orders that hives, comb foundation, sections, etc., could not be made fast enough to supply the many orders that were rushed in all at once. The wise ones will "learn by experience," and order such before the rush comes—for come it will. A word to the wise is sufficient.

The Birds are Here—harbingers of delightful spring. The weather has been so mild and pleasant during the past week, that we feel as though spring had actually come. We may have to pay for it by later storms and cold, but we may as well take all the comfort that can be obtained from the present. The bees have wintered well, and that is encouraging; for if they have "wintered" well, they will "Spring" safely. The robins and bluebirds are already here, and "the flowers that bloom in the Spring" will soon be spreading their sweet perfome on the air; all nature having cast off her garments of snow and ice, will revivify and the earth will bring forth her generous fruit for man's use and pleasure.

The grassy carpet will be enriched with flowers of gorgeous hues; the trees and shrubs will blossom and bear fruit, and the earth will yield her increase—spreading man's pathway with flowers, and his table with plenty.

The bees wintered on the summer stands are already sporting in the genial sunshine, and enjoying that health-giving exercise. All our reports state that they are in excellent condition, both in the cellars and out-of-doors, and everything promises a good year for honey-production. The white clover was not damaged (as was feared by some), and appears quite healthy. We may now take courage and hope for prosperity. The bees are already working on the maples in this vicinity.

◆

A New Uncapping-Knife has been invented in Italy. The following description of it and the manner of operating it, is thus given by Mr. Arthur Todd, in the *American Apiculturist*:

> During the recent meeting of the Italian bee-keepers at Milan, a machine was exhibited which Monsieur Bertrand (of the Swiss *Bee Journal*) considers an absolute novelty.
>
> This was an automatic uncapping-knife invented by Count Zorzi. It is composed of a blade mounted on a pivot and put in motion horizontally by a cog-wheel arrangement moved by a handle. To uncap the combs, they are placed up against the blade, so that as it moves it uncaps.
>
> The jury tested its merits in action, and awarded it a gold medal, and stated that it worked well and was capable of doing good service. To large producers of honey who do not hesitate to spend money to buy time and labor-saving machinery this may be of importance.
>
> Mr. Tartuferi, the owner of 1,000 colonies, and the largest honey-producer in Italy, expressed himself as greatly pleased at its workings.

◆

Those who have Bees, Queens or Supplies to sell should *at once* make it known in our advertising columns. Look out for a good trade, and an early one, too. Those who advertise will do the business—others will look on, be discouraged, and *keep* their stock. Our columns are open to all honorable dealers, and should be used liberally. Advertisements may be inserted weekly, alternate weeks, or once a month, as may be desired. See "Rates" on first page.

◆

Golden Rules for successful advertising, are these: 1. Attractive display. 2. Salient points clearly stated. 3. Repetition. Don't spend all your money in one insertion. 4. Choice of the Paper which reaches the people you want to reach. *These rules never fail.*

Mr. J. M. Shuck, of Des Moines, Iowa, has sent us one of his Invertible Hives, with surplus section case, a feeder of the full size of the top of the hive, and also another of large size for feeding on the bottom-board under the brood-chamber. The hive shows an astonishing amount of ingenuity and inventive genius. It also has a "lifter" for inverting the hives, only one of these being necessary for each operator in an apiary. With it, the inverting of a hive may be done with ease, and so gently that the bees will hardly discover that their house is being handled. Mr. Shuck writes us as follows concerning the hive:

> "I ship you one of my hives, etc., for your inspection. I think you will find more practical invention about it than in any thing in its line that you ever saw in your life. It conforms to the principles of hives as established by Mr. Langstroth, and yet is different from his hive in the fact that it can be used in four different positions instead of one."

Sure enough, there are so many points of practical invention about the hive that we cannot here describe them. Those who desire to know any further particulars should send to the inventor for his descriptive circular, where it is fully described and illustrated.

◆

New Price-Lists have been received from the following persons:

L. J. Tripp, Kalamazoo, Mich.—6 pages—Bees, Queens, and Supplies.

W. S. Ponder, Groesbeck, O.—1 page—Italian Queens.

Chas. D. Duvall, Spencerville, Md.—12 pages—Bees and Queens.

H. F. Moeller Mfg. C., Davenport, Iowa.—28 pages—Bee-Supplies.

F. Boomhower, Gallupville, N. Y.—12 pages—Bees, Queens, and English Rabbits.

E. S. Hildemann, Ashippun, Wis.—4 pages—Apiarian Supplies.

W. W. Bliss, Duarte, Calif.—16 pages—Supplies for the Apiary.

Shute & Bemont, Meriden, Conn.—4 pages—Poultry.

D. H. Bausman, Lancaster, Pa.—24 pages—Wind Engines.

Dougherty & Wiley, Indianapolis, Ind.—8 pages—Bees and Bee-Keepers' Supplies.

H. U. Ackerman, Indianapolis, Ind.—20 pages—Seeds, Household Conveniences, etc.

G. K. Hubbard, La Grange, Ind.—56 pages—Hubbard Bee-Hive, Supplies, etc. To this is added 30 pages devoted to the "first principles in progressive bee-culture." Price 10 cents, and well-worth it to any beginner.

Aspinwall & Treadwell, Barrytown, N.Y.—32 pages—Bees and Bee-keepers' Supplies.

Martin & Macy, North Manchester, Ind.—20 pages—Queens, Bees, Poultry and Apiarian Supplies.

B. F. Nysewander, New Carlisle, O.—32 pages—Bee-keepers' Memoranda and Catalogue of Supplies. Price 10 cents.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

◆

Frank Leslie's Popular Monthly for March comes with its usual variety of readable and valuable articles, attractive stories, and well-executed illustrations. Is the Panama Canal a failure? many ask. The question is answered by Mr. Arthur V. Abbott in "Progress at Panama." The well-known naturalist, C. F. Holder, in his "Wooing of the Birds," describes and illustrates some of the strange performances of the feathered gallants when they seek brides in the spring-time. Altogether it is a most enjoyable number.

QUERIES

WITH

REPLIES by Prominent Apiarists.

"Red Clover" Italian Bees.

Query, No. 221.—Is there any great difference in Italian bees as regards their working on red clover—enough at least to justify one in buying queens for that strain of bees?—W. M.

Hardly.—G. M. DOOLITTLE.

The difference is more imaginary than real. A "red clover" strain of bees is all "bosh."—J. P. H. BROWN.

I do not know, but as "red clover" queens cost little if any more, the trial of them is certainly not objectionable.—W. Z. HUTCHINSON.

It is so reported. If you contemplate buying "red clover" queens, have the party selling such send you a sample of his bees, and test for length of tongue with the Italians that you have.—H. D. CUTTING.

I have my doubts about it. No bee can reach the bottom of the clover tube. These latter may be so full of honey that any kind of bees can reach the nectar. Italians could get more of it than the blacks, and could reach it sooner. It may be that some Italians do better than others.—A. J. COOK.

Spring Feeding of Bees.

Query, No. 222.—Describe the best manner of spring feeding in order to hasten breeding. Also, what is the best and cheapest feeder for early spring feeding? Should not the vessel be small, and directly over the cluster?—Mich.

Fill a brood-comb with feed and place it next to the cluster. No feeder can be cheaper; for you have empty combs on hand, so the cost is nothing.—C. C. MILLER.

As before stated, I do not believe in the practice. If I did, I should use any preferred top-feeder, never any other kind.—JAMES HEDDON.

The division-board feeder is the best and cheapest for early spring feeding. Turn the feed in warm and place the feeder at the side of the brood once a day, but only when bees can safely take wing. It is not best to feed on cool or windy days.—G. L. TINKER.

The best feeder that I have tried for cool weather in the spring, to feed liquid feed, is a very shallow box partitioned off to keep the bees from daubing themselves, and having a tube-like passage away up through its centre. But I believe the most powerful stimulant to early breeding is extracted granulated honey, into which some "oil-cake meal" has been kneaded, made into flat cakes and fed as candy right over the cluster; and, after all, some colonies that have plenty of sealed honey manage to get these first.—G. W. DEMAREE.

I think that some kind of an entrance feeder (and there are many kinds) used to stimulate the strong colonies, and then equalize by drawing from the strong and building up the weak. This method has several good features. Some very practical bee-keepers feed in the open air.—H. R. BOARDMAN.

The best feeder, like the best hive and best frame, is the one that is liked the best by its owner. If by spring feeding is meant stimulation only, I advise feeding only an ounce or two regularly each night in some feeder that can be brought close down to the cluster in order that it may be kept warm. If because the colony lacks stores, then add a frame or two of honey; if that cannot be done, then feed a large quantity in a large flat feeder that can be set down close to the tops of the frames.—J. E. POND, JR.

Tight Ceilings in Brood-Chambers, etc.

Query, No. 223.—1. Is it advisable, in the spring, to have the ceiling of the brood-chamber tight, so as to keep the inside warm? 2. In a Simplicity hive, how can we prevent bees from opening a current of air by gnawing the ends of the enameled cloth?—An Inquirer.

1. Yes.—G. L. TINKER.

1. Yes. 2. This is a practical question, but after years of experience I hardly feel competent to answer it. I have discarded enameled cloth and have gone back to sheeting.—C. C. MILLER.

1. Decidedly yes. I use newspapers, spreading them two or three in thickness over the quilts, and some board weights over them. 2. If you must prevent this, lay some strips of wood, and fit them down closely at the ends of the cloth. With my square-joint hives the cloth is cut out as large as the outer dimension of the top of the hive, and laps on its edges, so that the upper sectional part of the hive rests on the edges of the cloth, thus securing a close-packed joint.—G. W. DEMAREE.

1. Yes, by all means! Not only to retain the heat but also to create moisture. 2. If any trouble is found from bees gnawing ends of enameled cloth, it can be prevented by binding with tin or tacking it to a thin strip of wood ¼ of an inch thick and 1 inch wide. I cover with enameled cloth and then place a cushion made of 5 or 6 thicknesses of old woolen carpet over all, and have no trouble. Bees will not gnaw much if no light comes through.—J. E. POND, JR.

1. Yes, though this matter is not so vital a one as many suppose, it seems to me. I have seen rousing June colonies that had passed the spring all open at the top of the hive. 2. I could not be induced to use cloths about my hives in the spring, summer or autumn.—JAMES HEDDON.

Fertilization of Queens.

Query, No. 224.—1. Which is the best method to insure a queen's mating purely where there are other races of bees in the vicinity? 2. How far will the queen go from her hive on the "bridal tour?"—Elgin, Texas.

2. She often mates with drones 5 to 7 miles away.—G. M. DOOLITTLE.

1. I know of no sure method. 2. Queens will often cross with black drones distant 4 miles. "Clean out," if possible, the "other races of bees in the vicinity.—J. P. H. BROWN.

1. The best practical method is to rear an abundance of pure drones in the home apiary. 2. I have had queens mated with drones whose hives were 1½ miles away.—W. Z. HUTCHINSON.

1. Rear your queens so early that other drones will not be flying. We secure drones early by stimulative feeding. 2. It is hard to tell, but for some miles, as has been demonstrated.—A. J. COOK.

2. It is reported that queens will mate with drones 5 miles away.—H. D. CUTTING.

1. Rear your drones and queens *early* or *late* in the season. 2. The queen will go probably a mile. We have seen matings of our Italian drones with black queens 3 miles off, when we first bred Italians, in 1865.—DADANT & SON.

Brood-Frame and Section-Case Covers.

Query, No. 225.—What is the best cover for brood-frames and section-cases? The bees cut cloth, quilts, muslin, etc., and sometimes make a terrible mess of them. I use sticks sawed and planed out of lath, mostly for shutting spaces between the frames, and I like them better than anything I have tried, but I would like something better if I could get it. For sections they will not do; and cloths full of holes, and sections smeared with propolis are not agreeable. What is better?—T. M. C.

I use enameled cloth.—G. M. DOOLITTLE.

I like factory-cloth and chaff sacks from October to May, and a board or Heddon honey-board after that.—A. J. COOK.

If you use good cloth *painted*, you will have no trouble. As a matter of course, it does not last forever, but will last several years. When we use sections, we hang them in broad-frames without any division between the stores. If you use the Heddon crate you must use his honey-board also.—DADANT & SON.

I think it the best way to have the tops of the frames or sections a bee-space below the top of the hive, and cover with a board. I know of no better flexible substance to place directly upon the frames than enameled cloth.—W. Z. HUTCHINSON.

I have used enameled cloth for about ten years with the best of success. The bees very seldom cut a hole in it, and put but little propolis on it, compared to cloth of any kind without the enameled surface. It is cheap, costing 2½ to 3 cents per hive, and I have some in use that have been used for several years.—H. D. CUTTING.

Convention Notices.

☞ The bee-keepers of Manitowoc and adjoining counties will meet at Kiel, Wis., on March 25, 1886, for the purpose of organizing a bee-keepers' association. J. H. ROBERTS.

☞ The Wabash County Bee-Keepers' Association will meet at the Court House in Wabash, Ind., on Wednesday, Apr. 7, 1886, at 10 a.m. All bee-keepers are invited. J. J. MARTIN, *Sec.*

☞ The bee-keepers of Stark and adjoining counties are earnestly requested to meet at Grange Hall (over Farmer's Bank), Canton, O., on Tuesday, Apr. 13, 1886, for the purpose of effecting a permanent organization. MARK THOMSON, *Sec.*

☞ The Southern Illinois Bee-Keepers' Association will hold its 3d annual convention in Teague & Harris's Hall at Duquoin, Ills., on Thursday, Apr. 8, 1886, at 10 a.m. A general invitation is extended. F. H. KENNEDY, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Kansas City, Mo., on Apr. 29 and 30, 1886. It is desired that this meeting shall be better than any of its predecessors. Essays will be read on the leading subjects in bee-culture, which will be announced as soon as arrangements are completed. Let all who have bees, queens, fixtures, etc., bring them if possible. Due notice will be given in regard to a hall. P. BALDWIN, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m. M. E. DARBY, *Sec.*

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.

B. F. CARROLL, *Sec.*

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; O+ east; +O west; and this ♂ northeast; ⸜O northwest; O⸝ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

"Differential Diagnosis."

N. W. M'LAIN.

Perhaps the reader may inquire what has happened now, which should furnish occasion for an article with such a ponderous and paralyzing caption. I hasten to disclaim any sinister motive, and proceed at once to locate the responsibility where it properly belongs. Dr. G. L. Tinker is the man, and the occasion was the reply to Query, No. 185, viz: "Are queen's eggs, when first laid, male or female?"

Although the correct answering of the question in the form in which it was probably *intended* to state it, requires correct observation and exact knowledge of the operation of the most subtile influences and delicate organic structures known to the embryologist, an off-hand opinion on the question, as it was stated, seems to have cost the Doctor no effort whatever, for he promptly replies: "Yes, of course they are." And I do not hesitate to deny that his answer can be successfully controverted.

I like to think of our bee-periodicals as fruit-baskets, into which are dropped the product of careful, painstaking and well-directed experiment, patient observation and ripe experience. I have distinct recollection of having found in these fruit-baskets, at intervals during the past three years, some cocoanuts (mark you, not "chestnuts") grown by the aforesaid G. L. Tinker, of "The Wintering Problem" variety," which contained about as much milk and strong meat as any specimens I have had the pleasure of sampling. Apart from the fact that the grain of the fruit seemed a little "coarse," as the horticulturists say, the fruit was to my liking. I suspect that while maturing a little too much "nitrogenous matter" had been taken up into its constitution.

Having been a reader of the various bee-papers for several years, I am quite conversant with the views of many whose names have thus grown familiar; and all will agree, that a very fair presentment of the characteristics of a writer flows from and is outlined by the point of his pen; and that he who habitually reads between the lines, will obtain a view in profile of him who writes. By this means I feel that I have had a long and pleasant acquaintance with many who will perhaps read these lines, but whose faces I have never looked upon, and Dr. Tinker is one among that number.

"But," the Doctor says, "a differential diagnosis" of freshly laid queen's-eggs "would floor" him. Now I submit that it would be inexcusably mean to stand by and see a friend "floored" by a little thing like a queen's egg, especially so when the egg is fresh. With the assurance that the specimens are of recent production, we may proceed to inquire what differential principle is revealed by a diagnosis of queen's eggs. I need not here explain that each egg in the ovaries of the queen is generated from a nascent cell; that all eggs when they leave the ovaries are unfecundated, and possess the innate power of producing drones only; that after fecundation the queen may generate two genders; that fluxion of male and female elements produce the female; that sex is determined by the volition of the queen; that the eggs intended to produce drones pass directly from the ovaries through the oviduct to the ovipositor; that those eggs intended to produce females, are, when leaving the ovaries, diverted by volition of the queen, and directed into the fertilizing sack, and that while passing through the folds of this sack, the differentiating, the sex-determining principle is introduced; after which the fecundated eggs pass on through the oviduct to the ovipositor. I have not been able to discover any difference in the shape and superficial appearance of the eggs, whether fecundated or unfecundated. The egg of a queen-bee, as seen through the microscope, is a most delicately constructed and beautiful object.

Mr. Frank Cheshire, in the *Journal of the Royal Microscopical Society*, of London, England, so aptly describes the appearance of a queen's egg as seen through the microscope, that the object seems verily present before the eye of the reader. He says: "If an egg be removed from either a worker or drone cell by the wetted point of a camel's-hair pencil, and then microscopically examined in water or glycerine, its surface will be found beautifully netted (the chorion), almost as though a tiny pearl had been covered with what the ladies call 'blonde,' hundreds of the meshes of which are required to coat it completely. Towards one end the netting makes its cells long and narrow and pointing towards a circular spot, just as the cordage of a balloon points toward the upper valve by which the gas is allowed to escape. This circular spot is really an opening called the micropyle, by which the spermatozoon enters and unites its material with the queen-cell, so bringing about fertilization."

"The tiny spermatozoon not only differentiates the entire creature, but communicates unerringly differences of species or mere variety even. The spermatozoa from Cyprian, Italian and English bees are to the most refined microscopical examination identical, and yet they contain differences which determine almost countless variations in form, color, size, instinct, capability and temper." "That the spermatozoon enters the egg is certain, for it may be found if the latter be carefully examined immediately after deposition." "The head of the spermatozoon is very narrow in order that the micropylar aperature may be passed."

Here, then, within this atom whose presence is revealed to us by the microscope, is latent those subtle yet potent forces, which may have been conserved for months, perhaps for years, awaiting the time and the environment when in complete agreement with the law of its development, it should be called upon to determine, even to the minutest variation, the distinctive characteristics of a new creature. The determination of sex is a matter of choice, a royal prerogative. The limitation of sexual development; the determination of form, function and instinct—reference being had to all female larvæ—is a matter of choice among the workers, the prerogative of intelligence superior to that of the queen. The queen, in the ordinary and normal performance of her function, is simply reproducing ancestral features which must appear in the direct line of hereditary transmission. Every unfecundated egg must produce a male larva, and every fecundated egg must produce a female larva. And here, in these direct lines, her prerogative of sexual differentiation ends.

It is here at this stage where a more subtile differentiating influence manifests itself, modifying larval adaptation and determining structural features radically different and radically divergent in instinct and function. It is indeed very wonderful that the queen should have the power to voluntarily control the sex of her offspring, but the marvel consists not so much in the exercise of that function, as in the singular and unique adaptation of the delicate organs by which the function is performed. That secondary characteristics should now appear, not inherent in ancestral germs, or contributed by ancestral transmission, appears to me far more strange. That this extra differential influence, operating through intelligence or instinct—and the partition between these two appears to be very thin—and in no sense through ancestral transmission, should become persistent, is marvelous beyond satisfactory explanation. We look to the future for explanation of how the same organic being may be made to assume either one of two divergent modifications of structure, instinct and function; and how this specialization for different functions has been made persistent, and from a remote origin transmitted from one generation to another through an anomalous agency.

Every receptive soul is filled with reverence and awe when brought into the presence of stupendous manifestations of power. I have stood upon the shore of the ocean and in the mountain gorge, and on Table Rock; I have seen the rising sun reflected from the snow-capped peaks of the Rockies, and have found myself saying, "How wonderful are thy works!" and yet, I could not help adding: "However, I find everything very like what I had expected." I have looked upon the revelations of the telescope, and have followed the astronomer as he spoke with familiarity of the millions of miles measuring the inter-stellar spaces, and with mathematical accuracy computed the times and seasons in the great design of planetary revolutions; and I have tried to lift up my thoughts to the contemplation of "The Great Designer," whose ways are past finding out. If it be true that the mind is thus filled with admiration and reverence in the presence of the immense and imposing, what shall be the emotions of the receptive soul, when the transcendent grandeur of the minute is disclosed? I have looked upon the revelations of the microscope, and the blood has stopped in its customary courses, and with blanched cheek and downcast eyes, I felt like saying: "Put off thy shoes from off thy feet."

Verily our thoughts should be humbled and our emotions sublimated, whether we contemplate the handiwork of omnipotent power and the sway of immutable law in the creation and ordering of the eccentric solar system, or whether we recognize the presence of that same power and that same law, differently manifested in the unfolding of insect life, and in determining the differentiating conditions, which, with marvelous and delicate precision, establish and perpetuate form, function, and instinct.

"From the drift of a star to the drift of a soul,
The world is all miracle under control;
The butterfly's wing and man's reverent awe,
Alike wear the chain of inscrutable law;
A law that allures us, but ever eludes,
That baffles our groping, but never deludes;
We never can hold it; it holds us secure;
And the wisest in reading shall longest endure;
A Faith-bow of promise, a promise replete—
Forever fulfilling, but never complete;
We chase where it beckons, and gather the gold,
And lo, on before us, new treasures unfold!"

U. S. Apicultural Sta., Aurora, ♂ Ill.

For the American Bee Journal.

"Brethren, Please Don't!"

WM. F. CLARKE.

Dr. Miller's article on page 132 of the AMERICAN BEE JOURNAL, in which the above pathetic entreaty occurs, reminds me of an incident which happened many years ago at a Methodist Conference in England. A good brother who lisped, fell asleep during the proceedings, dreamed that the Conference was having a big quarrel, "spoke out in meetin'" and exclaimed, "Peath, brethren, peath!" A member of the Conference, in a fit of sudden anger, replied by asking in stentorian tones, "Who's at war, you sleepy hog?" It was a very coarse and unchristian rejoinder. I wash my hands utterly of the latter part of it, but beg to ask Dr. M., "who's at war?"

In his anxiety to make out a case, I really think the Doctor does me at least *a trifle* of injustice. Now, Brother Miller, did I say any thing at all approaching the words you put into my mouth? "As who should say, 'You just dare to say a word against the Heddon hive.'" I started abruptly with very strong language in commendation of the new hive, and then said, I had not spoken rashly, but was prepared to back up my statements with strong reasons and cogent arguments. I invited "any gladiator" who felt so disposed, to "pick up the gauntlet for a *friendly tilt* over them." A "friendly tilt" observe. Surely, you have no objecto that! I can truly say I never felt more good-natured in my life than when I wrote the paragraph which has excited Dr. M's alarm. I was just brimful of pleasure, "tickled to death" at having found exactly the hive I had been looking for so long.

If Dr. M. suffered from bee-stings as much as I do, he would be able to appreciate my gladness at having a system of manipulation put before me by means of which I can escape opening the hive, except on rare occasions, and do most of my work in the apiary so quickly, that even an Italian would hardly have time to interview me. When people are full of happiness over some piece of rare good fortune, they are no more quarrelsome than a bee is when full of honey.

There is another place in the Doctor's article where I think he gives me a homœopathic dose of injustice. "It is entirely proper for A to say that no other hive but the Heddon should be used, giving reasons for such belief." To be sure, he quotes A, but the connection plainly implies that he means C. Now, I did not take the ground that "no other hive but the Heddon should be used." I said what implied that I meant to use it, and gave the reasons. I am selfish and wicked enough to hope that everybody won't adopt it right away, because I want to make a little at honey production before the thing is overdone, as I am sadly afraid it will be when my theory of hibernation and Mr. Heddon's hive are generally adopted.

In one point I think the worthy Doctor is inconsistent with himself. He sets out by saying he is dreadfully afraid there is "just a speck of a cloud which begins to threaten" the bursting forth of a storm. This feeling came over him, he says, "as I read what points to a controversy over the Heddon hive." Farther on, he says, "When any man puts before the public a new thing, especially if it be patented, that public has the right to discuss it." Well, I started the discussion by laying down a proposition in favor of Mr. Heddon's book and hive. Was that wrong? I didn't want the discussion to be one-sided, and therefore invited all who disagreed with me to "come on" and have a "friendly tilt." I think this is just what the Doctor says the public has a right to do.

I do not know a shade of difference between the meaning of the words "controversy" and "discussion." I know that controversy is often very hot, especially between rival schools of theology and medicine. I also know that Irishmen sometimes have what they call "a discooshun wid sticks."

Guelph, Ont.

For the American Bee Journal.

Lamp Nursery vs. the Queen-Nursery.

HENRY ALLEY.

On page 120, Mr. W. Z. Hutchinson gave some of the reasons why he used the lamp nursery. Some of the reasons he gave why he uses the "lamp nursery" are just the reasons why I cannot use such a contrivance for hatching queen-cells. Any arrangement that requires attention as often as once in "two hours," will not do for me. How does Mr. H. manage such an apparatus during the night? If the proper temperature is kept up, queens will hatch as readily in the night as in the daytime.

In the early days of my queen-rearing business, I was obliged to watch a "hatching-machine" that required as much attention as the "lamp nursery," and during the season that I was obliged to work the hardest I was deprived of sleep and rest at night in order to save all of the young queens that were about to emerge. Well, I do no watching now-a-days. One day I decided to devise a "queen nursery," and now I can go to bed and get up when I please, as far as hatching queens is concerned.

By the use of the queen-nursery I manage to get along with half the number of nuclei that my queen-rearing business would otherwise require. Each "nursery" of 18 cages is equal to the same number of nuclei hives; if no nursery cages were used, so many more hives would be needed.

I remove a fertile queen from a nucleus, and in 3 days I introduce an infertile one of the proper age to make the mating flight the same day. Sometimes when the weather is unfavorable, I am obliged to introduce virgin queens that are 2 weeks old; but I can do it as well as I can introduce those that have just emerged from the cell. All of my queens are introduced at night, that is, about sunset, by methods that I have given. If the weather is favorable, they are pretty sure to be fertilized the next day. I place the cells in the nursery cages on the day after they are sealed, and before night many of the queens will emerge. After the cells are placed in the nursery, I give no more attention to them until the queens are old enough to make the "marriage" flight.

I never saw one word in print that would indicate that Mr. Hutchinson ever used a "queen-nursery." I rather suspect that he is as much of an old fogy concerning the queen "nursery" as I was regarding the bellows-smoker. After using a tin pipe for 20 years, in which I could burn only tobacco, it was pretty hard to convince me that the "new-fangled" smoker was as good as my old pipe; but when a friend sent me an improved Bingham bellows-smoker, and I had tested it, I found that it was superior to any thing I had used for smoking bees. I would suggest to Mr. Hutchinson that he would have less watching to do and less trouble if he should use some good "queen-nursery" in connection with his "lamp nursery;" have his queen-cells built so that they can be easily and quickly separated, and place them in cages. No queen would then be lost even if a dozen should emerge at one time. Now, Mr. H., try one of the new "queen-nurseries," and you will not say another word in favor of the "lamp nursery" for rearing queens.

Wenham, Mass.

For the American Bee Journal.

Northeastern Michigan Convention.

The annual address of President R. L. Taylor was as follows:—W. Z. HUTCHINSON, *Sec.*

I congratulate you to-day upon the the strides forward that the vocation to which we are so devoted has made during the year that has lately closed. But few continue to engage in apiculture and attend conventions of bee-keepers who are not deeply interested in all that pertains to the business, so I congratulate you, too, that our vocation is one which our hearts and hands work together with alacrity. Thrice unhappy is he whose heart rebels at the work his hands must do; thrice fortunate is he whose steps, though quick, lag behind the interested rapidity of his soul. Interested as you are in the honey-bee, and coming here as you do to hear, speak and learn about it, I should but weary you were I to devote the time allotted me to any other subject, or to mere generalities upon this subject, so I shall speak specifically of various matters connected with bee-keeping.

THE POLLEN THEORY.—Many, no doubt, are still interested in this theory. Some have decided for or against it; others are still inquiring. My experience in wintering bees during the last winter—the most disastrous of all winters to bee-keepers—is to my mind a striking corroboration of the truth of the pollen theory. I put into the cellar 195 colonies, all deprived of bee-bread by exchanging their combs for empty ones entirely or almost entirely free from that nitrogenous food. So far as I was able to judge after repeated and thorough examination, I had no normal colony but what wintered perfectly; while during the two preceding winters, under apparently more favorable circumstances respecting temperature, my bees that were provided with the ordinary amount of bee-bread and occupying the same cellar, suffered very severely. This is not a demonstration of the truth of the pollen theory, for in apiculture undiscovered circumstances often strikingly alter cases; but has it not a tendency in that direction? It is amusing to witness the asumption and to examine the reasoning of many of the opponents of this theory. They are heard on every hand, declaring with Mr. J. E. Pond, Jr., viz: "As yet, however, this theory has no proof in its favor;" and that "the fact that bees do survive the severest winters with large quantities of pollen left in their hives, and do not survive at times when they have no pollen at all, is positive proof that the theory is not correct."

What is the pollen theory? Do its enemies claim that it teaches that the "leaving of bee-bread in the hive" by a colony of bees is a cause of imperfect wintering? or that it teaches that bees always survive the winter if bee-bread is absent? I had supposed that it was the consumption of bee-bread and not the "leaving of it in the hive" that the believers in the theory think to be injurious, and I do not understand that they deny that colonies perish sometimes by reason of other causes than that of bee-bread eating.

FOUNDATION IN WIRED FRAMES.—There are many experienced apiarists who are still of the opinion that it is not desirable to use foundation in wired frames. I think that such are in a serious error. If it were a mere matter of convenience—of ease in fixing foundation in frames, and of certainty in knowing that it will stay in place invariably when given to strong colonies, I could understand it; for some men like their own way even with uncertainty. But from my experience during the last season with 185 colonies in which I had in use several hundred combs made from foundation used without wires, along side of those made from foundation on wires, I declare that there is a far more important point involved than mere convenience. It is a question of strength of colonies, and so of success or failure. I believe that the time is near when every intelligent apiarist who uses foundation for brood-combs will use it in wired frames. There is not one comb in a hundred drawn out in strong colonies from foundation fastened into unwired frames in which the cells are not more or less enlarged by the stretching of the foundation; and this will be found true without reference to the quality of the wax used, or to the manner in which the foundation is made, or to the machine used in making it. Wax will stretch under the heat and weight of a strong colony unless it is strengthened in some way or made heavier than it ought to be. I found in examining hive after hive repeatedly, that the queen occupied such combs with extreme reluctance even when placed in the middle of the brood-nest, and under compulsion she would fill only about one-half of the comb with eggs; while wired frames, standing next to them, had brood up to the top-bar.

HOUSE APIARIES.—During the past fall I built a honey-house and a bee-cellar which, so far, have proved very satisfactory. Some may be sufficiently interested to know how they are made. The house is 30 feet square, with 12-foot posts, and is built against the east end of my barn, which has also a cellar under it. The new cellar is divided east and west through the middle, and the north half is the part I use for bees. In the west end of it is a cistern 5½x15 feet, and a door in the east end opening directly into the apiary. The ground slopes considerably to the east, which gives an easy passage without any steps or stairs, and at the same time enables me to bank the cellar up to the sill on the north and east sides, except where the door is. I consider the position of the cellar on the northeast corner—taking the two buildings as one—a great advantage. It is thus protected both from the prevailing cold winds of winter and from the heat of the sun in the early spring.

I have in this cellar 219 colonies, and the mercury has stood almost continually at 45½° to 46°, Fahr. Continued extreme weather will cause it to vary a little, but not much. I now think that it would have been as well to have put 300 colonies into it. The building itself is divided nearly through the middle into a shop and honey-room. The shop is of sufficient size to accommodate a horse-power and saw-table. The floor and all the walls are filled with sawdust, as is also the ceiling of the honey-room. There is, too, tarred paper in all the outside walls. The windows are hung on pivots at the middle of the side-rails of the sash, thus making it easy to let out any bees that may be brought in with cases of honey. Above is a large, well-lighted room for storing, etc. The doors are all bee-proof. The chimney is built from the bottom of the cellar, and in it is a galvanized smoke-flue fitted to receive pipes from stoves in the honey-room. Within the chimney and outside this flue is ample space for ventilation, and provides the best conditions for securing that object, which can be taken advantage of when thought necessary by means of the ventilators placed in the chimney, one near the bottom and one near the top of the cellar.

Cellar Temperature for Bees.—The discussion at the Detroit Convention, last December, indicates that a great change is taking place in the opinions of prominent bee-keepers with regard to the best cellar temperature for wintering bees. It appears that several bee-keepers have wintered bees very successfully in cellars where the temperature was much above what has hitherto been thought best—sometimes running up even to 90° and 100°, Fahr.; and it seemed to be the general sentiment that it would be better to raise the temperature of our cellars to about 55°, Fahr. Since in bee-culture, circumstances are so likely to alter cases, I should raise the temperature of my cellar very gradually.

Sectional Brood-Chambers.—Two events of the past year in apiculture demand some attention. They are, the publication of the book, "Success in Bee-Culture," by Mr. James Heddon, and his "new hive." The hive, in its important features, is, I believe, entirely original. Against its originality even Mr. A. I. Root can only say that years ago he thought of making a hive somewhat on this principle; but his hive was to have no frames—simply slats nailed across to hold the combs.

It was at least 30 years ago, when I was but a lad, that my father put me to making bee-hives, for he used to keep a few bees, and I was the mechanic of the family. He gave me an old hammer and an older saw, whose condition was worse than even its age would indicate, and some rough lumber one foot wide. Under his directions I made each hive by cutting four boards about two feet long, nailing them together into a long box without top or bottom, and then sawing it into three equal boxes. I then with saw and jack-knife cut out notches in the top of each part and put slats across. These three sections were to be placed one above another, and to be interchangeable. I suppose when the top one was found full of honey, the honey was to be cut out and the empty one put under the others. I do not remember of helping to cut out any honey. The bees disappeared; it was during the time of those renowned winters when bees never had the diarrhea. But remember, I claim priority over Mr. Root.

But let us return: The brood-chamber of Mr. Heddon's hive (or perhaps I should say a single section of it) holds eight frames of the capacity of five Langstroth frames. For a brood-chamber, one, two or more of these can be used. They are interchangeable, reversible together or separartely, and you could not fail to get refractory bees into the sections for comb honey by putting them between the two parts of the brood-chamber, using a queen-excluding honey-board to confine the queen to one of the parts. There are several other advantages to be derived from it, as it seems to me, on account of its susceptibility to manipulation, and every change can be made off-hand and without handling a single comb. I have faith in the hive. Look out for a revolution!

The book is also new—made on a new plan. It has kept largely out of the fields occupied by other works on apiculture. It has sought pastures new. It has been prepared for the use of the specialist, and the author never loses sight of practical advantages to be gained from every operation. Indeed it is a direct answer to the question, "How can the greatest pecuniary success in apiculture be attained?" and the answer is made full and complete by entering into all the details of practical work. No bee-keeper can afford to be without it.

Lapeer, Mich.

Read at the Indiana Convention.

Cause of Loss in Winter.

CHAS. F. MUTH.

The "pollen theory" was brought up, I believe, by Mr. James Heddon, and has had an abundance of discussion in connection with wintering bees. The best bee-keepers differ widely in this matter, and the problem seems still unsolved. The causes of bee-diarrhea are very likely the same, but appear different because looked at by different persons and under different surrounding circumstances.

Pollen is a nitrogenous food and wholesome; without it the existence of the bee would be an impossibility. The larvæ derive from it their body; and it is essential to animal growth. Pollen preserves for years its nutritious qualities, if kept dry, but it sours in a damp place, like other farinaceous matter, and swells over the brim of the cells. In such condition it has lost its wholesomeness, and is not any more the pollen we were talking about. Bees will get sick if they are obliged to use it. About the same can be said of honey. It will keep forever in a dry place, even in open vessels, and exposed to the sun; but it will sour in a damp cellar, and the tendency to sour will increase with the height of the temperature. Sugar syrup will sour in a warm place which need not be damp. Many reports, from a number of bee-keepers, stating that sugar syrup would not save the lives of their bees, sustain my argument.

There are several points which we should remember when preparing our bees for winter, viz: Bees can create a great amount of heat when in a cluster and well supplied with healthy food. The next is that their exhalations condense into water when the outside air is colder than the temperature of their hive. The moisture will increase with the falling of the temperature, and if it cannot escape as fast as created, the combs and the insides of the hive will become moldy, and their honey and pollen turn sour—become decomposed. I do not think any one has yet seen a colony of bees that died with the diarrhea without moldy combs and sour honey in those parts upon which they clustered.

Perhaps most of us remember the box-hives without a bottom-board, and each corner standing on a pebble or a block an inch or two above a plank. Moldy combs and diarrhea were unknown to the bees of those fortunate bee-keepers, and if a loss in winter occurred, it was a case of starvation every time. Those ignoramuses had accidentally an advantage over us scientifics. Let us make a note of it.

If you want moldy combs and your bees to have the diarrhea during winter, cover the hive up tightly and contract the entrance to about an inch or less. The severer the winter the more the bees will be affected. Try it, and if you lose most of your bees by diarrhea, take any scape-goat you please, but do not blame the pollen nor the fall honey. If you want bees to winter well, confine them to their brood-chamber and let each colony have plenty of honey. Fall honey is as wholesome as the best clover, and it makes no difference whether the most of it is capped or uncapped; nor is there any difference as to the amount of pollen that is left for them.

Have the hive-entrance wide open, and place in the upper story, on the covers of the brood-chamber, a straw-mat or its equivalent. These covers are generally composed of three boards, so-called "third covers." If they fit together very tightly, I should bore an inch hole in one of them, which will admit of the necessary upward ventilation, while the straw-mat on top prevents a draft and keeps off the cold. There will be no moldy combs and no diarrhea. Try it; and if you fail, by this method, to winter your bees as well as did the box-hive bee-men of old, let us know it.

I have recently both read and heard some fine arguments on the pollen and wintering theories, apparently based upon scientific principles, but they could not withstand the solid matter-of-fact arguments brought to bear against them at the Detroit Convention. Unless substantiated by facts the most plausible theories must be discarded. Bee-men in the North winter their bees in cellars—in dry cellars, and in damp cellars; have their bees bred up so that when they put them out in April or May their colonies have not only brood in 7, 8 or 9 frames, but 7, 8 or 9 frames *full* of brood—almost ready to swarm. The veracity of each of these men need not be doubted. The one with a dry cellar maintains in it a temperature not above 45° to 50°; while the damp-cellar winterer runs the temperature as high as 50° to 90°. Pollen is consumed, or brood could not be reared, but no diarrhea develops.

Neither pollen nor honey is the cause of bee-diarrhea, to the best of my observation; but cause either of them to be decomposed, then it will act like poison, the same as moldy corn would affect your stock, or decomposed meat the human family.

For the American Bee Journal.

Prevention of After-Swarms.

R. DART.

There are two ways by which I prevent most of the second or after-swarming. I place my new colony on the old stand, setting the old hive to one side. At the time, or the next day, I place the old hive on a new stand, fronting the hive to the north, and shading it from the sun.

My other way of handling is to draw the frames from the old colony, and shake most of the young bees from the combs in front of the new colony, leaving bees enough in the old hive to nurse the young brood. I carry the old hive to a new stand. This way of handling makes more work, but one will get no second swarms from hives handled in this way; the old colonies get strong very quickly, and are soon at work in the sections. I use three swarm-catchers for my 60 colonies. If I have a second swarm I let it run into the swarm-catcher and leave it there over night. Next day I run them back to the old colony, taking away the young queen as they run in. All the other young queens left in the old hive were disposed of on the previous night.

I do not have to climb trees, cut off limbs, scrape swarms off the bodies of trees, and get my bees cross. I have used swarm-catchers for 6 years out of the 30 years I have kept bees, and they save over one-half of the work in the swarming season.

Ripon,⊶ Wis.

For the American Bee Journal.

Horizontal, Divisible Brood-Chambers.

E. KRETCHMER.

Finding that much of the Bee Journal is occupied with comments on a horizontal, divisible brood-chamber for bee-hives; and seeing some of them, at this late day, headed "An Original Invention," I beg permission to add a few scraps of history.

In *Knauff's Bienen-Zucht*, published over fifty years ago, I find directions for constructing and using such brood-chambers; the several parts were made as follows: A sectional chamber was constructed of braided straw, 16 inches in diameter, and 8 inches deep, top and bottom consisting of slats to which the combs were attached; three of such sections constituted a hive. The upper section was designed for the surplus honey, whilst the lower two sections constituted the brood-chamber. In the directions for using, the author directs prior to swarming to equalize the amount of brood in the two chambers by placing the upper brood-section at the bottom, or exchanging the position of the two sections, and when equalized to make artificial swarms by removing one section, bees and all, and place an empty section under each full one.

Later, under date of July 23, 1867, Letters patent No. 67,123 contains a drawing of a horizontally divided brood-chamber. A few extracts from the specifications may give more light: "In providing a horizontal bee-passage through all the combs." (This is the space between the lower and upper tier.) Next follows the description of the bottom arrangement, on which are placed the brood-chambers described as follows: "The lower body of the hive is a square box; upon this box I set another similar box....The interior of these boxes I provide with movable brood-frames *R*, arranged side by side, consisting of two vertical pieces *M*, top-bar *K*, and bar *O*.... The vertical pieces *M* are made wide enough to have the edges of the several frames to touch each other....Between the sides of the case I insert a wedge-shaped piece of lath for the purpose of closing the crevices between the frames."

This hive was then called "Kretchmer's *alternating* hive," and consisted of three equal chambers, each about 8 inches deep, the two lower chambers were used for brood, the upper for surplus honey. In those days, in the absence of comb foundation, we frequently placed the surplus chamber *under* the brood until a *start* of combs were made, then placed it on top, at the same time the two brood-chambers were alternated, that is, the upper chamber was placed on the bottom, and the bottom chamber under the surplus honey receptacle. By this alternating process the centre of the brood-nest was brought next to the surplus chamber, which caused the bees to enter and begin work in said surplus chamber more readily than otherwise; the honey, if any in the brood-chamber, now in the lower chamber, was usually removed and placed in the surplus chamber; for artificial swarming the brood in the two chambers were equalized by a frequent alternating, and then the new colony was made by simply removing one chamber, bees and all, and placing an empty chamber under it; for wintering, both chambers were used, and the space between the two furnished an excellent passage from comb to comb.

The question may now arise, why did we not continue to manufacture this hive? I answer: 1. These shallow frames were denounced by most bee-keepers; many, no doubt, remember the assaults made on the Langstroth frame, which was nearly 2 inches deeper. 2. Central bars in frames, and with it the bars and space in my alternative hive were objected to as occupying space that should be occupied by brood. 3. This hive costs about one dollar more than a hive with a single chamber, which we were thus manufacturing.

This has not been written in the interest of any patent. This invention is, and has been for years public property, and if Mr. Heddon encounters as many difficulties in introducing his hive as I did 18 years ago, he will dearly earn the small amount he asks over the cost of manufacturing.

In conclusion let me say I have made and used hundreds of these hives, and from actual experience can say that this hive possesses points of excellence not found in any hive, and if the surplus chamber is made of the same size as one of the brood-chambers, it is the simplest form of a hive, and my advice to all is, give it a fair trial before denouncing it on theoretical impression.

Coburgh, ♀ Iowa, Feb. 26, 1886.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
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The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
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The 7 above-named papers	6 50	5 50
and City and Country	2 00	1 50
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Journal of Carp Culture	1 50	1 40
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Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Local Convention Directory.

1886. *Time and place of Meeting.*

Apr. 6.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburg, Ind.

Apr. 7.—Wabash County, at Wabash, Ind.
J. J. Martin, Sec., N. Manchester, Ind.

Apr. 8.—Southern Illinois, at Duquoin, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bees have Wintered Well.—F. H. Kennedy, Duquoin, ♀ Ills., writes:

The bees have wintered well here, and the outlook for the season of 1886 is very encouraging. We think that honey is cheap, but I find sale for all I have to dispose of at 10 cents per pound.

Gone.—B. B. Tony, Holly Tree, ♂ Ala., on March 12, 1886, writes:

Our brother, Nelson Perkins, late of Minnesota, is no more. He was laid away yesterday; his last resting place being but a few hundred yards from the place where he first settled. We miss him in the bee-fraternity. We and our children and all his acquaintances miss his good counsels. Also the M. E. Church has lost a brother of undoubted Christian influence. Still we hope his good influence is not lost, but will remain with all who knew him. He is now free from his pains forever—gone over the river—and is waiting for his friends.

Home Market for Extracted Honey.—I. N. Arnold, Richmond, ○+ Iowa, on March 10, 1886, writes:

I see so often in the Bee Journal complaints about a home market for extracted honey. I will give my experience which might be of some benefit to bee-keepers who have a poor home trade. When I first had extracted honey I took a sample of it and a copy of the Bee Journal to our county-seat and the other smaller towns. I showed the honey, and the picture of the extractor and honey-knife in the Bee Journal, and explained how it was extracted, and told what an advantage it was to the bees to return the combs to them; also telling how it had been proven to take from 14 to 20 pounds of honey to make a pound of comb. I tell them it was as fine comb honey as ever was made, before it was uncapped and extracted. When I can get a man to taste my honey and listen to me, if he has a spare dollar I am sure to sell him a bucket of honey. If he buys once I never have any trouble to sell him honey the second time. I sold 2,000 pounds of extracted honey, and had 1,000 pounds of white clover and linden honey in two-pound sections. I sold the 2,000 pounds of extracted honey, and had three-fourths of the honey in sections on hand; so I told my customers that I had a fine lot of comb honey which I would sell to them at 14 cents a pound. (I had sold my extracted honey at 10 cents per pound.) Some of them told me they did not want to pay 4 cents a pound to chew beeswax. If I would have depended upon the middlemen or grocerymen working up an extracted honey-trade for me, I am sure I would not have a trade for 1,000 pounds a year, where I have a home trade for 8,000 or 10,000 pounds a year.

Feeding Bees, etc.—E. H. C., Mattsville, ♀ Ind., propounds the following queries:

1. How can I tell whether or not my bees are needing feed? I dislike to open the hives in cool weather. 2. Will elm, soft maple and sycamore lumber warp if cured in the shade, and then used for making hives?

[1. Without seeing the contents of the hive you cannot, with certainty, determine the quantity of honey it contains. You can *guess* of the amount of honey better than any one not there.

2. That is the tendency of those woods, when compared with pine and whitewood (tulip or yellow poplar). Both of these are good, and have merits peculiar to themselves, but many prefer the whitewood.—Ed.]

The Season of 1885.—T. C. Wire, Grinnell, ⊙ Iowa, on March 8, 1886, writes:

I commenced the season of 1885 with 15 colonies, increased them to 44, and obtained 600 pounds of comb honey in one-pound sections. Bees did very well until the grasshoppers came and robbed the clover of its sweetness. While the grasshoppers were so thick the bees did not gather enough to live on. We had a cold rain that destroyed a good many of the grasshoppers, and the bees worked for 2 or 3 weeks as only bees can; then the frost put an end to honey-gathering. I took off the honey-racks and found 11 late swarms with but very little honey, so I made a feeder that I could use without disturbing the bees. As I had nothing to feed them but white comb-honey worth 15 cents per pound, I bought granulated sugar and fed enough to last them through the winter. I examined them last week and they were all right and strong. I winter my bees in a shed open to the south, with a tight roof, double back and ends, and filled with leaves. I place the hives 4 inches from the ground, 4 inches apart, and 4 inches from the wall, and pack them with dry sawdust. I put a board in front of the hives and tuck around and over it with old carpet, and leave the tops of the hives exposed to the sun. I use chaff cushions in the caps. When the weather is warm enough I turn down the board at the entrances and let the bees fly, and take a hooked wire and help them clean house. They have kept very dry.

Bee-Culture in Maine.—J. B. Mason, Mechanic Falls, ♀ Me., writes:

Ten years ago but very little was done in bee-culture in Maine. While it is true that there were a few bee-keepers who showed a little interest by trying some of the improved hives, one could see nothing throughout the State but a few rough box-hives in some back place, or half hidden by a stone wall or fence. So little honey was produced that it was very seldom seen in the market, and when it was brought to market it was in rough, unsightly packages. Now, honey can be found in nearly all our markets, and put up in as nice shape as anywhere in our country; and nowhere in the world can a nicer quality of honey be produced. Maine can boast of hundreds of apiaries of from 2 or 3 colonies to hundreds, neatly arranged with movable frame hives all painted nicely, and all the improved implements that are now used in bee-keeping in any State are now used here. Tons of comb foundation are used, and tons of honey produced. There are several persons in the State who now devote their entire time to the business. For statistics the reader is referred to an article on page 104.

Selling Adulterated Honey.—13—J. W. Bittenbender, (40), Knoxville, ♀ Iowa, writes:

It seems that since bee-keepers have made such progress in producing comb and extracted honey some people cannot or will not believe that honey can be sold at the present low price without its being adulterated. In these days of enterprise I do not think there can be any one so ignorant in this direction as to write such articles as have been published in certain newspapers. We all are aware that there is a class of men who, when they see others prosper in business, become jealous and immediately endeavor to devise some way by which to injure them. When I first began in the bee-business I had to contend with just such persons who tried to injure my business by making false statements about me; but I thought that if I have not proved myself more of a man than that people should believe that I had adulterated my honey, why they must just believe it until they learn better. They finally did learn better, and false reports ceased. I trust that all have been honest enough to trust this matter to itself. The proper way is, not to sell a package of honey without the bee-keeper's address upon it, and if there are any who sell honey, that are not willing that it should bear their names upon it, such should immediately quit the business. I am glad that Rev. West corrected his mistake.

Bees Enjoying Sunday.—E. T. Medearis, Mt. Sterling,+○ Ills., on March 16, 1886, writes:

Sunday, March 15, was the first real spring-like day that we have had, and the bees turned out in full force. Last winter I lost 8 colonies out of 16; they were protected with fodder. For this winter I left them just as they stood in the summer, with nothing around them, and I have lost one. It died before the weather became cold. I will work my bees for comb honey, this year, in one-pound sections for my home market. I can sell more than I will produce, right from my place, 2½ miles from town. Every colony that I have is strong.

When to Ship Bees.—Otto Kleinow, Detroit,○↘ Mich., on March 12, 1886, says:

Last autumn I put into winter quarters about 65 colonies of Italian and Cyprian bees, and they seem to winter all right. Some have 2 to 3 frames of brood. They had good cleansing flights several times during the winter, but of course the trying months are March and April. April is generally the most dangerous month for bees, for then they are sure to go out for water and pollen, and the air being chilly, many of them will not return to their hives again. Hence I would advise those who purchase bees, not to have them sent before about April 15, for they may dwindle away.

Two Queens in One Hive.—R. M. Osborn, Kane,+○ Ills., on March 9, 1886, writes:

January was the only month so far this winter that gave us zero weather, six days ranging from 2° to 18° below zero. My bees had flights on five days in December, 2 days in January, 5 days in February, and 1 day in March. My 65 colonies are in splendid condition. I have not lost a colony yet. They are all packed on the summer stands. On Feb. 9 they all had a good flight, when I examined several colonies and they all had young brood in every stage, and eggs. On Oct. 17, 1885, while preparing a certain colony for winter, which contained a pure Syrian queen, I was surprised to find 2 queens, the old queen and her daughter, both on the same comb and on the same side, and both laying eggs within less than 3 inches of each other. It was good luck for me, for the daughter was a beauty, and I just clipped her wings and introduced her into another colony, which was made queenless a few days before by taking off the sections. The queen was on the sections, and I had taken her into the honey-house, but I found her too late. The weather being so cool I did not think that a queen would leave the brood and go above. Some of my neighbor's bees are in poor condition. Mr. E. Armstrong says that his 95 colonies are wintering nicely. The white clover and winter wheat looks promising for a good crop, at this date.

Position of the Hive-Entrance.—F. M. J., of Augusta,○↘ Iowa, asks this question:

If, as some claim, the bees are better protected and commence breeding sooner by having the entrance crosswise of the frames, why not have the entrance to the Heddon-Langstroth hive at the side instead of at the end? Bees would not have so far to travel to any part of the hive then.

[No. I have used both ranges of entrances for years. This is one of the theories that I could never verify in practice. But theory also says that the entrances, as you propose, would retard summer ventilation. I want the entrance at the end of the hive, and the combs and the sections to run parallel with the frames below, and all slightly pitched forward. I know that both ways have advantages, but the latter has the most. After a bee spends hours in the field, it "travels" in the hive but a moment. If you throw a pailful of water into a lake, there is then a pailful more than before, but not *practically* so.—JAMES HEDDON.]

Bees Wintered in a Cave.—S. Stephenson, Gladstone,+○ Ills., writes:

I wintered 102 colonies of bees in a cave. It was 5 feet below the surface of the ground; 1 foot above the surface on the edges, and 4 feet in the centre; it was 8x36 feet, and was covered with inch boards, a layer of hay, and about 1 foot of sand. They are mostly in Langstroth hives, and all have natural stores. Some colonies have not lost a half-dozen bees, and none have lost more than a double-handful. I think it is a bad practice to feed sugar syrup; it arouses suspicion in the minds of honey-consumers, and it ought to be stopped.

Bee-Business in Iowa.—I. N. Boyles, Urbanna,○+ Iowa, on March 15, 1886, says:

I have just received the census returns of this State, and thinking that the bee-men of Iowa would like to know the number of colonies in the State, and the number of pounds of honey produced here in 1884, I give them as follows: Total number of colonies, 148,384; pounds of honey, 1,997,931; pounds of wax, 35,064. This report is not very good for Iowa, as it gives only about 13½ pounds of honey per colony. The best county for honey, as reported, is Dubuque county, the number of pounds being 48¼ per colony; and the least number of pounds per colony in any county in the State is that of Tama county, which is only 2¼ pounds. I think there must be some mistake about that county. The following is a report of a few counties, showing the difference in the yield of honey in the same year: Tama county, number of colonies, 12,065, pounds of honey, 27,637; Benton county, number of colonies, 3,378, pounds of honey, 66,550; Monona county, number of colonies, 1,083, pounds of honey, 34,832; and Dubuque county, number of colonies, 1,893, pounds of honey, 91,710.

Bees in Good Condition.—Gardner Boyd, Petrolea, Ont., writes:

I commenced the season of 1885 with 4 weak colonies of bees, increased them to 9, and took 1,000 pounds of extracted honey and 50 pounds of comb honey. I am wintering them on the summer stands in double-walled, sawdust hives, with 3 inches of packing all around them. The bees are in good condition at present. I am well pleased with the BEE JOURNAL. I would not be without it.

Early Birds.—Dr. C. C. Miller, Marengo,♂ Ills., on March 17, 1886, says:

Robins and bluebirds are here, and unless the weather changes bees may be out in a week. So far they seem to be in good condition.

House-Wintering of Bees.—W. Mason, Fillmore,+○ Ind., on March 17, 1886, writes:

My bees have had high times in the past three days, all being in fine condition, except 3 colonies that have dwindled, one being queenless, one having an infertile queen which was left out on the summer stand as a test from that of house wintering; the other seems to be afflicted with diarrhea. My house-wintering proved very satisfactory. The bees consumed but a small amount of honey, only about an average, per colony, of 7 pounds for 3½ months. I have 31 colonies. They carried in rye meal yesterday.

Successful Wintering.—A. Wortman, Seafield,+○ Ind., on March 17, 1886, writes:

My bees had a good flight on March 14 and 15, and all have wintered without the loss of a single colony so far. They appear to be in a healthy condition. I have them nearly all covered with boxes without top or bottom, made about 2 inches larger than the hives, and the space packed with forest leaves, with chaff cushions on top and a wide board to cover the box to keep the rain and snow out. They are protected on the west and north, from the winds, by sheds and high-board fences. The hives are ventilated at the bottom by a hole 4x4 inches square cut in the bottom-board and covered with wire-screen. They were packed about the last week in October; but they have had a flight every 3 or 4 weeks since they were packed, which I think beneficial, for safe wintering on summer stands.

Good Prospects for 1886.—Frank A. Eaton, Bluffton,⊸ O., on March 15, 1886, says:

My bees had a fine flight yesterday and to-day. Those on the summer stands—40 in all—were bringing in pollen. The 100 colonies in the cellar were never in healthier and finer condition at this time of the year. Prospects are good for the bee-business the coming season.

Bees all Right.—Chas. Haas, Lower Salem,⌒ O., on March 8, 1886, says:

I have 48 strong colonies of Italian bees in two-story chaff hives, all wintering well so far on the summer stands. They have plenty of stores. I fed each colony $1 worth of sugar last fall. I lost but one colony, whose queen was a drone-layer. We have frequently had nice summer days so the bees would often get a flight. From all appearances we may have a good season for honey this year.

Bees and Flowers.—Prof. A. J. Cook, Agricultural College,♀ Mich., writes:

The interesting article by Mr. Latham, on page 153, contains some points that I think need confirmation. I believe that all botanists now hold that all flowers which are showy or contain nectar, either need insects absolutely or else are materially benefited by the visits of insects. Without doubt this was *always* true. I know of no authority in geology nor any reason to believe that there were showy flowering plants prior to flying insects, or even to sweet-loving insects. In the economy of Nature both were developed together. The one without the other would be like a button-hole and no button. Geology shows conclusively that there were no terrestrial plants until the upper Silurian time, and no true flowering plants until the Cretaceous period, or near the close of the Mesozoic or Middle life time. The only flowering plants before that era were conifers, whose pollen is easily carried by the winds. Even as soon as such flowering plants (the inconspicuous ones) appeared, there were lace-wing and locust-like insects which had good powers of flight; and quite likely fed in some part on pollen. We have positive knowledge that showy flowers, and the secretion of nectar were synchronous in time of appearance with Hymenoptera (bees and wasps) and Lepidoptera (butterflies and moths). This fact is loud in praise of the importance of bees in Nature, and should never be misrepresented, as too much of value depends upon it. Destroy bees, and other sweet-loving insects, and you strike down much of our most valuable vegetation. No point in geology or biology is better sustained.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

☞ We take pleasure in calling the attention of our readers to the advertisement of Montgomery Ward & Co., Chicago, which appears in our paper. This is an old and reliable house, and their immense business is but the natural result of the careful and honorable manner in which it is conducted.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

Beeswax Wanted.—We are now paying **22** cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

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Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Mar. 22, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb scarce. Some 1lb, sections have brought 17@18c. Extracted, plenty and dull, 6@7c. California comb honey, in 2lb. frames, 9@12c.

BEESWAX.—22@25c. per lb. Not much offered.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Extracted, in barrels, 4½@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 22@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.

BEESWAX.—Scarce at 25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—We quote: choice comb, 1-lb. sections, 16c.; fair to dark, 12@14c.; in 2-lb. sections, 12@14 cents. Extracted is dull and slow. Dark brings 3 1-2 to 4c.; white, 6@7c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 20@23c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market continues dull and very few sales are reported. Best white in 1-lb. sections can be bought at 13 cts. per lb.

BEESWAX.—It is in good demand at 25@27c.

M. H. HUNT, Bell Branch, Mich.

Advertisements.

BEE Hives and Sections.—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

FOR SALE.—Italian and Cyprian Bees and Queens (in any quantity), Extractors, Bee-Books, etc. Address, OTTO KLEINOW,
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100 **COLONIES of ITALIAN BEES** at **$6.00** each. **50** fine Brown Leghorn hens at $1.00 each.

Eggs for Hatching.—White L., Brown Leghorns and S. S. Hamburgs, at $1.50 for 13 eggs; R. P. Games, at $2.00 for 13 eggs; Rouen Ducks, at $2.50 for 13 eggs. Address,
12A13t WM. LOSSING, Hokah, Minn.

WYANDOTTES, Polish, Sumatras, all varieties of Bantams, Silkies, Ducks, Pheasants, Exhibition and Imported stock.—Full particulars in free Circular. Send postal.—**B. PERRY**, Woodbury, N. J.
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40 **CENTS per pound, boxed.** VonDorn's Dunham Brood Foundation. **Circular Free.** **T. L. VonDorn**, *Omaha, Neb.* None Better
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BOSS BEE-FEEDER.—Sample and full particulars for 30 cents.—For feeding inside of any hive, without disturbing the Bees.

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11A3t GRINNELL, IOWA.

PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.

11Atf **O. CLUTE, Iowa City, Iowa.**

40 COLONIES of ITALIAN BEES for SALE, together with extra hives, frames and utensils. I intend to move away in the spring. Terms given upon application. **L. ADAMS,**
8E3t MAYFAIR, Cook Co., ILLS.

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SEND Italian Queens, from February to December, untested, for $1.00 each; per dozen, $10.00. Tested queens, $2.00 each. On weekly orders dealers have special rates.

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30 COLONIES OF

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In movable-frame Hives.
PRICE from $7 to $10,
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11A3t

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of all kinds. I make a specialty of LANGSTROTH ANE MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

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Italian Bees and Comb Foundation.

50 to 100 **COLONIES** of very choice Italian Bees for spring delivery. Prices greatly reduced. Nuclei, Queens, and Bees by the pound for the season.

COMB FOUNDATION FOR SALE.

Wax made up by the lb. or worked for a share of the wax. Samples of foundation free. Price-List ready.

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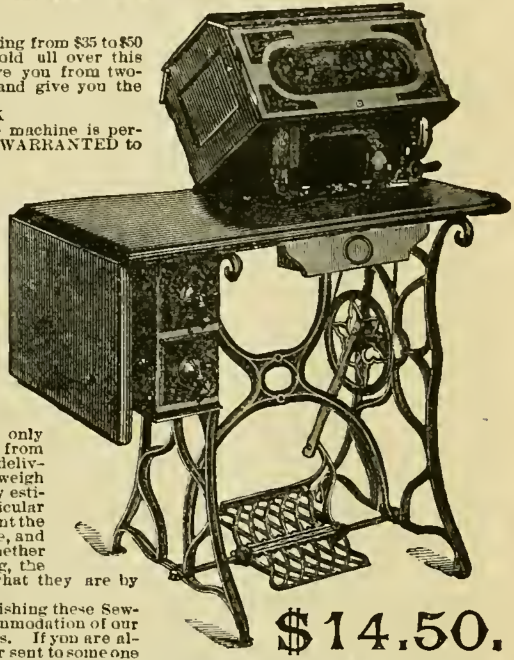

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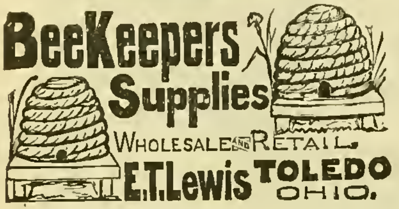

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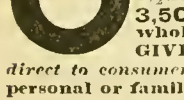

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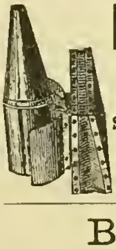

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We pay **22c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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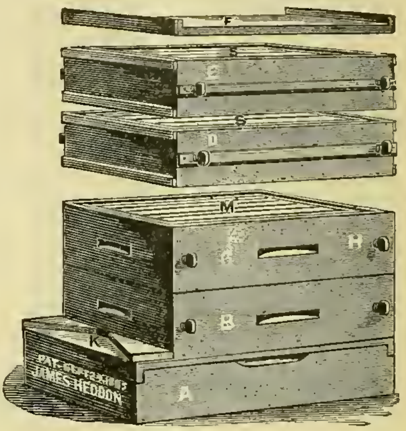
The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives, 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison-St., CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

(ESTABLISHED 1864.)

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6A8t 14Ctf COBURG, Montgomery Co., IOWA.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. March 31, 1886. No. 13.

The Weather still continues fine, and the bees are still reported as generally in excellent condition.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

◆

Look Out for the colonies that may be short of stores. The bees are consuming considerable honey now, and if necessary should be fed liberally.

◆

An Ingenious Clock, moved by electricity, is now creating a sensation in Paris. The dial resembles a tambourine, on which the figures are represented by painted flowers. Instead of the hands, a couple of bees—one large and the other small—serve to indicate the hours and the minutes. They are set in motion by concealed magnets, and crawl from flower to flower, all round the dial in twenty-four hours and one hour respectively.—*La Siecle.*

◆

Criminal Carelessness was illustrated lately by the following which we notice in a daily paper. A farmer by the name of Hutchinson went from Kentucky to Kansas, and concluded to take some bees—but not knowing enough to close them into the hives, raised great consternation. The paper says:

> He chartered a box-car at Bloomfield, and Wednesday put in eight horses, with his two sons and a dog to take care of them. There was plenty of room, so he also placed in two bee-hives. When the train had gone about five miles the bees got warmed up, poured out of the hives, and a big row followed among dog, horses and boys. The train also carries passengers, and some of the infuriated bees got into the cars and stung several people severely. When it was stopped Mr. Hutchinson's family were liberated, but they were in a fearful condition. It was only after a hard fight that the hives were removed and the stock placed back in the car. The train came without the bees, but over an hour behind time.

Comb Foundation, when it was first produced, was by some thoughtlessly called "artificial comb." To this inexcusable blunder may be charged the many stories now afloat about "comb being made, filled with glucose, and capped by machinery." Prof. Wiley took this as the *cue* for his wonderful but untruthful story, and many others, when pressed for proof of their assertions about this matter, have to refer to the manufacture of "artificial comb," as they ignorantly term it, to attempt to prove their stupid and ignorant assertions! Thus, bee-keepers have some of their own number to thank for making a basis for such *lies* by their foolish blundering.

To add to the complication, awhile ago some persons advised the use of glucose for feeding bees when honey was scarce, for building up in the spring, etc. This gave the opportunity for some to say that bee-keepers were adulterating their honey, and for proof many of the daily papers pointed to the fact that glucose manufacturers were filling orders for tons of it, to be used in apiaries. The BEE JOURNAL made a vigorous fight against its use, and it is now generally abandoned by bee-keepers.

Another difficulty now presents itself. Some enterprising reporters for the city newspapers have already stated that sugar is being consumed largely by bee-keepers, who feed their bees sugar; that the bees filled the combs with it, and it was sold for honey! In their ignorance several have declared that this is easily proven by the fact that so much liquid honey is now "turned to sugar." They mean the granulated honey, but are not aware that nearly all *pure honey* will granulate on the approach of cold weather!

We sold some granulated honey to a man, in this city, a short time ago, and a minister, who was partaking of a meal at the house, remarked as he ate some of that granulated honey, that it was sugar fed to the bees, and had "turned to sugar again;" that the "liquid honey" on the market was pure, but it disagreed with his stomach, and he could not eat it! so he preferred the adulterated!! The gentleman who bought the honey of us, came to the BEE JOURNAL office and informed us of what "his reverence" had asserted. We could but laugh at such "ministerial" ignorance about honey, and told our friend that the granulation was proof of purity—that nearly all the "liquid honey" found at this time of the year, was adulterated with glucose—and that its being adulterated accounted for its being a liquid!

Now the BEE JOURNAL gives this caution: To use sugar for feeding bees gives an opportunity for those who "know much less than they think they know" about honey, to say that they "know a bee-keeper who buys barrels of sugar to feed the bees, which store it in surplus sections, and it is sold for honey!" To "avoid the appearance of evil," use honey, and honey only, for feeding bees! In this way we may deprive the enemies of our pursuit of one of their pet arguments, in attempting to prove that the bees or their owners are adulterators of honey.

◆

The First Volume of the *Canadian Bee Journal* was completed with last week's issue. We wish it long life and prosperity.

A Fire, on March 7, destroyed a warehouse filled with bee-keepers' supplies, belonging to Mr. A. I. Root, Medina, O. As it was a building without a chimney, and never had a fire in it, the conclusion is that it was the work of an incendiary. Mr. Root remarks thus in the last issue of *Gleanings*:

> Somebody deliberately took down the stout bar across the doorway, swung the doors open, unbuckled the head-straps to the halters, turned the horses loose, and then set fire to the hay, straw, and combustible goods stored near it, even while he felt the stiff southern breeze blowing strongly toward the long rows of seasoned lumber piles, on each side of the railway track, from the warehouse to the factory.

The loss is about ten or twelve thousand dollars—something less than $5,000 more than the insurance.

As Mr. Root went home, while the fire was still in progress and the firemen were working to quench it, and went to *sleep*, it did not seem to worry him very much. How he could have done so, however, is more than we can imagine!

◆

There will be a Rush for supplies needed in the apiary after awhile, and we cannot do better than to urge all to look over their stock, ascertain what will be needed, and get it on hand before it is necessary for use—thus avoiding the perplexity consequent upon its possible delay in reaching them in time.

◆

A Chinese Version of the saying, "How doth the little busy bee," is as follows, and was sent to us by one of our subscribers:

> How? Sie, belly small chin chin sting-bug
> Im-im-implove ebly slixty minnit all a time.
> Go, pickee up sting-bug juice all a day
> All kin' places 'loun' flowels just got busted.

◆

New Price-Lists have been received from the following persons:

Watts Bros., Murray, Pa.—48 pages—Bee-Keepers' Supplies, and "a short but practical treatise on the art" of bee-keeping.

T. S. Sandford, Bradford, Pa.—8 pages—Bees, Queens, and Supplies.

A. O. Crawford, South Weymouth, Mass.—16 pages—Honey Labels and Apiarian Supplies.

W. H. Osborne, Chardon, O.—8 pages—Fowls, Bees, and Apiarian Supplies.

S. Valentine & Sons, Hagerstown, Md.—26 pages—Albino and Italian Bees, Success Bee-Hive and Apiarian Supplies.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

◆

Frank Leslie's Sunday Magazine for April is an exceedingly interesting number, containing articles to please all tastes. It is especially rich in engravings from paintings and drawings, and the art lover will also find congenial matter in the sketch of Leonardo Da Vinci, with its two accompanying portraits. There are portraits of Bishop Hannington, who is supposed to have been martyred in Africa, Archbishop Gibbons, of Baltimore, the second American Cardinal, and the late Vice-President Hendricks, whom Dr. Talmage eulogizes as a "Christian Politician." There are many other articles of present and future interest, and the number is full of beautiful pictures which please all, young and old.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Cause of Bee-Diarrhea.

Query, No. 226.—I should like to ask whether it is generally considered necessary that bees should void a dark feces to have diarrhea? This liquid voiding is in consequence of impaired digestion. Would not the pure honey, if imperfectly digested, assimilated and voided, cause diarrhea?—H., Ont.

I think that the disturbance of brood-rearing in a low temperature always causes more or less of what is known as bee-diarrhea. Of course this question opens an inexhaustible field for discussion.—H. R. BOARDMAN.

It is not. After a long confinement healthy bees often void a dark semi-solid feces on the first spring flight. Mr. S. Corneil has proved this beyond dispute. The liquid voiding is due to the principal causes—dampness in the hive and cold. If such a thing could be as imperfectly digested and assimilated as honey in bees wintering under good conditions, I answer no to the latter question.—G. L. TINKER.

It is hard to say just where diarrhea or disease begins. Bees will hold a certain amount of fecal accumulations for a certain length of time and not become sufficiently diseased to peril the life of the colony, but if these accumulations are too great, the bees become diseased; and when they are filled almost to bursting, against their instincts, they void in the hive, and their excreta is found replete with pollen. Beyond these well known facts, let each one speculate and experiment for himself, till we finally find out and all agree on the exact conditions that will avoid the accumulation of fecal matter, in all places and at all times. I consider the problem practically ours.—JAMES HEDDON.

Pure honey will not cause diarrhea. The voiding of feces in spring is not bee-diarrhea. That disease is a voiding of feces in the hive, accompanied with lack of strength. The one is simply natural; the other a disease, and is probably caused by impure stores; ordinarily I think by fermented honey, owing either to not being sealed up in the fall, or else not properly ripened before sealing. Excess of moisture accompanied by extreme cold would produce the disease.—J. E. POND, JR.

I cannot say what the general opinion is on the point you mention. But at the close of the terrible blizzard we had here in January, after confinement of only about ten days, I had the pleasure (grim pleasure, you say) of seeing bees so distended in body that they could hardly drag themselves on the alighting-board. The abdomens of these bees contained nothing but a transparent liquid, with no solid matter visible under a glass of considerable power. These bees had been fed on sugar syrup. I had one colony that was fed on sorghum syrup, their discharges, though small in quantity, were dark in color; those fed on natural stores discharged a yellow substance, while the sugar-fed bees, the heaviest loaded of all, discharged a transparent liquid that might have evaded notice had it not been for the snow on the ground.—G. W. DEMAREE.

I think no, to the first question; to the second, yes; but there comes another question, is pure honey ever imperfectly digested? and then comes the question, what is meant by pure honey? I might take oath that I believed a comb of honey I offered for sale was pure honey, yet if I fed it to bees they might take oath it was part pollen. Besides there may be a difference in pure honey. On the whole, I give it up.—C. C. MILLER.

Bees Drowning in Sap-Pails.

Query, No. 227.—How can we prevent such heavy loss in spring by bees drowning in sap-pails during sugar-making time. Can we feed sweet water or anything to keep them busy? If so, should it be fed in the hive or out-doors? Or would it excite them to hunt further and increase the trouble? We lose quite a number every spring in our sugar-camp, and those of our neighbors'?—W. L. J., Ind.

Yes, it would excite them to hunt further, and increase the trouble. It would be better to throw a mosquito-bar over the pail, or a square piece of wire-cloth, and let the sap run through the meshes. This wire-cloth could be used several years.—DADANT & SON.

I do not think that feeding near home would cause the loss of many bees. The only way I can see of doing is to furnish covers for the pails. You might sue the sugar-makers for damages. (?)—W. Z. HUTCHINSON.

Covering up the pails will prevent the loss; or will that cost more than the bees are worth? If you feed at that time, it will cause them to go further in search of food.—H. D. CUTTING.

I know of no way unless we keep them in a cellar. The sugar-makers ought, for their own good, to cover the buckets, in which case all would be safe. I have a sugar-bush of 600 trees. All the buckets are kept covered. Then all dirt, leaves, rain-water and snow are kept out. This is what makes the syrup nice.—A. J. COOK.

An answer to this question is what I have been seeking after for years, and the only practical one I have found is to keep them in the cellar until this danger is past. Feeding seems to make the matter worse.—G. M. DOOLITTLE.

Sections with Side-Openings.

Query, No. 228.—What has been your experience regarding the use of one-pound sections with openings on 4 sides?—W.H.W.

I have not as much confidence in them since trying a few (perhaps a hundred) as I had before.—C. C. MILLER.

I have not tried them, but their peculiar construction would defeat my idea of concentration.—G. W. DEMAREE.

I have not used such sections, but recommend them on the authority of a number of eminent Canadian bee-keepers who believe side-openings to sections of great advantage. But for that matter, judgment on a question of this nature hardly requires the test of experience. It is self-evident that the side-openings will overcome several of the greatest objections to separators, as the preventing of nearly all sticking of the sections and separators by propolis, and allowing the bees to cluster practically in a solid body in the super.—G. L. TINKER.

In my experience with open-top-and-bottom sections, I have encountered no deficiency that open-sides could supply. I readily imagine troubles that they might bring us. Many will test them the coming season and report results. They increase the number of angles for glue, and most of all, acute angles. Only experience can decide. If they come into general use, I am wrong; if not, I am right in my theory regarding them.—JAMES HEDDON.

Feeding Bees—Granulated Honey.

Query, No. 229.—1. What is the cheapest food for stimulative feeding of bees in the spring? 2. Why does some white clover honey granulate sooner than other kinds?—R. G., Mo.

1. That depends on prices. In some places, honey; in some, granulated sugar. 2. Ripeness may have something to do with it.—C. C. MILLER.

1. Good dark honey, such as is quoted at from 4 to 6 cents per pound. 2. Honey varies in chemical composition, even when gathered from the same class of flowers. Perhaps owing to atmosperic causes. The variation in composition is sufficient to account for the difference in tendency to granulate.—G. W. DEMAREE.

1. Second quality of extracted honey. If it is purchased in the open market it should be boiled at least 10 minutes before feeding to the bees, as a safe-guard against the introduction of foul brood.—G. L. TINKER.

1. The cheapest grades of honey. Honey contains nitrogen, cane-sugar does not. Nitrogen is a necessary element to the production of tissue—brood-rearing. 2. Probably because it is not so well ripened, and contains less acid. Raw honey, if not too thin, will candy sooner than well

ripened honey. The presence of acid is a prevention of granulation.—JAMES HEDDON.

1. If one has in stock frames of honey it is the cheapest, because most handy. Honey diluted one-half with pure water is probably as cheap as anything; for while it may cost a trifle more than sugar, a gain will be found to more than compensate in the larger amount of brood reared therefrom; at least this is my own experience. I am not an advocate, however, of early stimulative feeding. Like a two-edged sword, it is liable to cut both ways.—J. E. POND, JR.

Are the Drones Pure?

Query, No. 230.—Will the drone progeny be pure from a pure Italian queen, if she is fertilized by a black drone?—C. T.

Yes.—H. D. CUTTING.

Yes.—W. Z. HUTCHINSON.

Practically so.—G. M. DOOLITTLE.

I think so.—A. J. COOK.

According to parthenogenesis they will be pure. This is doubted by some. When breeding queens I always avail myself of the doubt and reject such drones.—J. P. H. BROWN.

Yes. Some will tell you that the mating stains the queen as it stains the hen, but queens cannot be compared to hens; since in the hen the eggs are fertilized before they are full grown; and in the queen they are not fertilized till they pass by the sperm-sac on their way out. The contents of the sperm-sac cannot stain the queen, since there is no *exchange of blood* between the egg and the mother after the fertilization of the egg.—DADANT & SON.

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CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ⊸ east; ⟜ west; and this ♂ northeast; ↖ northwest; ↘ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

The Hibernation of Bees.

WM. F. CLARKE.

At last Prof. Cook has spoken! Goaded by the imputation of "contemptuous dogmatism," he can keep silence no longer. The Professor begins by ladling out considerable taffy, an article in which I do not deal. My forte, if I have any, is plain English. In the present case, it seems to have been too plain. I have committed the unusual blunder of calling a spade a spade. Is it not "dogmatism" to assert unqualifiedly that bees do not hibernate, and is it not "*contemptuous*" dogmatism to do this without any condescension to proof or even investigation?

I do not see the point of the ox story, and think it was a bull to tell it. Dr. Tinker speaks positively, but he has facts behind him, which gore without mercy. An ox cannot gore without sharp facts to act as horns.

The Professor's article may be briefly summed up in two words. He admits the condition, but wants another term than hibernation to express it. I do not see how he can be accommodated until another English word is coined having precisely the same meaning. The compound phrase "winter torpor" might do, but why use two words when one will suffice?

The only semblance of proof that bees do not hibernate is furnished in the assertion that they do not act exactly like wasps. But *do* wasps hibernate? The Professor assumes that they do, and I shall not deny it. In this state they are quiet. There is "profound coma." Is not the same true of bees? Outward signs of life there are none, but on being subjected to warmth, a slight movement takes place, and there are signs of returning activity. In a winter cluster the bees are constantly changing places with each other. This is a sign of life surely. Motion indicates life. The bees breathe and move, a very little. But the Professor thinks that bees do not hibernate because exposure to greater degrees of cold arouses them, while it only makes the slumber of the wasp more profound. The reason for the difference is obvious. The wasp has no stores with which to get up a glow of heat, while the bee only needs to consume honey, and its warmth at once increases.

It is not necessary to withdraw food altogether to prove hibernation, for it is not contended that in this state they fast wholly, but only that they eat sparingly, and at intervals of considerable length. The Professor tells us that a hibernating wasp will not sting, while a hibernating bee will. Even a dead bee will sting. The slightest pressure sets the deadly machinery a-going, and woe betide the hand that is near it!

The Professor only desires that we will not persist in using the word hibernation, when winter quiet or quiescence is just as good—he thinks far better. But hibernation is more than quietude, it is partial suspension of the vital processes; "the minimum of functional activity," as the Professor himself has phrased it. It is a state peculiar to the winter season. Bees are often quiet in summer, but they do not hibernate then. The season of the year forbids their doing so. The Professor wishes the term hibernation to be reserved for "another phenomenon more startling and wonderful." What is it, pray? On analysis it will be found to be, in all its essential features, one and the same with that witnessed in the case of the bees. Sleep cannot properly be termed hibernation any more than trance can be called sleep, because the faculties are all awake, though in a state of inaction and repose, both during hibernation and trance. The subject of both these phenomena is quite conscious, knows all that is going on, has the full use of the senses, and needs only to have the strange embargo on its activity removed, to be up and doing as busily as ever. Trance might do as a substitute for hibernation, only it does not express the winter idea, for trances are as common in summer as in winter. I see nothing for it but that the Professor will have to get his throat capacity enlarged so as to swallow this word of four syllables, without making any wry faces over it.

Guelph, Ont.

For the American Bee Journal.

Managing Bees in the Spring.

C. W. DAYTON.

When I first began keeping bees I did as some others do, viz: let the bees go it in hives the full size. While practicing this plan it was not very unusual that colonies swarmed out in the spring, especially when they were a little weak or diseased. After awhile I came to the conclusion that the contraction of the brood-chamber was at least a partial preventive. With this conclusion I have found nothing that appeared to be at variance, so I continue (as I have done for the last two years) contracting the brood-chambers as fast as the colonies are brought from the cellar to the number of combs that contain brood, which is generally two, and never more than three. In this way the colonies are kept contracted until about May 10, when it is time for their combs to be filled with brood so entirely that the queen deposits her eggs right down around the bottom of the combs, and up the other side clear to the top-bars. At this time the insertion of another comb is necessary.

In contracting to so few combs it may be seen that there is but little if any room for stores. Formerly each colony would have from 1 to 15 pounds of honey, and as it was so hard to know how long it would last, or which colonies had the most, without going over the whole apiary, sometimes a colony would get entirely out of honey, destroy the brood, and consequently be unprofitable for the season. This suggested the contraction of the brood-chamber, and feeding every day enough diluted honey to last until the next.

With the right arrangements the above proves to be quite an agreeable method of management, as it requires but one hour to feed 50 colonies. It stimulates brood-rearing, facilitates great contraction of the brood-chamber, which is so necessary in spring, and what is more, no innocent bee is obliged to retire with an empty stomach.

The feeders which I use are made by inserting an extra cross-bar some distance below the top-bar of a brood-frame, and enclosing the sides with a thin material so as to form a sort of trough. The feed is put in with a funnel through a hole in the quilt and the top-bar of the frame. The feed should consist of two parts of water to one part of honey, and in amount should be about 3½ ounces. I believe that there are few colonies so small in the spring that it will not pay to nurse them up, as they afterward make very paying colonies; while colonies that were crowded with brood and bees barely make a living.

The time during which I feed the bees daily is from May 1 to June 10. The following is a record for 1884, of the average number of solid combs of brood per colony, taking the apiary through: May 1, about 1½; May 10, 2⅓; May 18, 4¼; May 27, 6½; June 5, 8; June 15, 11; and June 25, 12. Contracting the brood-chamber and feeding warm food just before night, is the best safe-guard that I know against absconding or "spring dwindling." From the above may be understood what I call solid combs of brood.

Bradford, Iowa.

For the American Bee Journal.

Length of a Queen's Fertility.

GUST. MURHARD.

I have within the last few years had occasion to discover some prevailing errors which need correction. One is the prevailing opinion that the fertility of a queen of any of the yellow-banded varieties of bees is good for five years. Another error is that an issued first swarm of bees should be returned to the parent colony to store honey there, instead of establishing a new colony of bees; and still another error is, that Mr. H. Alley, in his "Handy Book," claims to know that he can give to a colony of bees, which he has deprived of their queen and combs, and so reduced to the most helpless and miserable condition bees can be put into, the true natural "swarming impulse" (of preservation of race through colonial propagation or reproduction), by confining them in an empty wired-box for some length of time before giving them fresh brood to start royal cells. I will speak here but of the first error and reserve the other two for a future time.

It is a well-known fact that some varieties of bees are more inclined to swarm than others, and that the swarming propensity in a variety of bees makes that variety objectionable to the honey apiary, as bees that are inclined to swarm cannot well furnish much surplus honey. I have tried the blacks, the Italians, the Cyprians, the Holy-Lands, the Mt. Lebanons, the Albinos, and the Carniolans, and have found the blacks the least inclined to take to swarming in my large hive, which is a composition of the Langstroth and Quinby hives, having the suspended brood-frames of the former, and the surplus-honey arrangement of the latter.

The next least inclined to swarm I have found to be the Mt. Lebanon colonies that had prolific young queens of the previous season's late rearing. I have had occasion to observe those queens and their fertility very closely, and I found that with the end of the first season's service in my large hives, a Mt. Lebanon queen has reached the meridian of her life fertility and usefulness, and henceforth is on the decline, and will give entirely out in the early part of the third season, when the sagacious workers will ball and supersede her. As with the expiration of the first season's service in the honey apiary the queen has come to her decline, she is, although her fertility is but half exhausted, still no longer fit for the honey apiary, as her decline is liable to show signs in the early part of the next season, when the natural instinct of the double self-preservation, as well of the colony as of race, will prompt the workers to swarm; it would be as well to establish a new colony as to try the vital strength of the old queen, which had better be lost at that time than any other season of the year, in case she cannot stand the swarming.

Each colony in a honey apiary should, at the expiration of the honey season, either be furnished with a young queen reared that season, or the colony be taken to the queen-nursery to make use of the queen's remaining half of fertility, by furnishing brood for the nuclei, when, at the end of the season, the colony with a reared young queen may be taken back to the honey apiary to serve next season again for surplus-honey gathering.

Portland, Oregon.

For the American Bee Journal.

The Honey Market.

WM. F. CLARKE.

Combine, combine, bee-keepers all,
Whether your "biz" be large or small,
Keep up the rates of honey;
Ten cents extracted is the price,
Eighteen for section-boxes nice,
And see you get your money!

Beware, beware the dangerous den
Of hard and grasping middle-men—
Sell honey "straight," as whisky
Is swallowed down the leathery throats
Of tough, saloon-frequenting bloats—
All other modes are risky.

But now that sugar is so low,
And may, perhaps, yet lower go,
Before it finds rock-bottom,
Had we not better face our fate—
Let the extracted go for eight?
And—comb—well if you've got 'em.

You'll see the prices current veer
From eighteen there to thirteen here,
'Till men of wisdom wonder
Whether it is not time to "get,"
And, for their parts, consent to let
Bee-keeping go to thunder!

Sweet friends, can we not find a field
That will a flow of honey yield,
Our present one to double;
Also a way to handle bees,
Doing our work with greater ease,
And half the time and trouble?

The laws of trade are bound to rule,
And he who doubts it is a fool—
Low prices catch the masses;
If we intend to "take the cake,"
Honey we must as low-priced make
As sugar or molasses.

Dear friends, I hate to see you wince
Because the truth I cannot mince,
But must your pet corn tread on;
Yet still a living you can earn,
If you at once turn to and learn
Bee-keeping *a la* Heddon.

If this we do, glucose "must go,"
For we will honey sell as low
As that nefarious mixture:
Oh! won't it be the jolliest fun,
To the arrant humbug run
And honey stay a fixture?

Poetic justice will be doled
To those who have the public sold
When glucose thus goes under;
Then give them competition hot,
And send their syrup shops to pot,
"Mit blitzen und mit dunder."

Mead and metheglin then will be
Drunk by the multitude like tea—
Hams will be cured with honey;
No bee-man wear a down-cast look,
But each possess a pocket-book
Which has some ready money!

Guelph, Ont.

For the American Bee Journal.

Keeping Bees Near a Railroad.

J. A. GREEN.

I see by the answers to Queries No. 198 and 199, that some of those responding think that the smoke of passing trains would be detrimental to an apiary situated near a railroad. I can give some facts from experience.

On the west side of my apiary, and only 200 feet away, is the railroad station, where a much larger quantity of smoke is discharged than at any point away from the station. On the east side, at the foot of the bluff, on the edge of which the apiary is located, are the kilns of the drain-tile works, with the tops of their chimneys nearly on a level with the apiary, and less than 200 feet away. During the summer these chimneys pour forth almost constantly a heavy volume of smoke. Whenever the wind is from the east, each puff of wind blows a cloud of smoke into or over my apiary; and the same thing happens whenever the wind is in the west, and there is a locomotive at the station.

While this is very unpleasant to me, I have never been able to discover that the bees are injured by it. When there is a heavy cloud of smoke above the hives, the incoming bees will wait until it lifts a little, when they will come in with a rush. Possibly during busy times there might be some loss by the time spent in this way, but I think it is insignificant.

In regard to the jar of the trains: There is a heavy grade here, and often a passing train will shake the whole house. The jar, however, certainly does not injure the bees during the summer, nor when wintered out-of-doors. As I never have wintered bees in the cellar, I cannot say in regard to that.

Dayton, δ Ills.

For the American Bee Journal.

My Improved Section-Case.

G. W. DEMAREE.

I have tried nearly all kinds of cases and racks to hold sections, and have invented several new ones, all of which in their use revealed some objectionable feature about them. My last improvement, however, a description of which I give below, seems to me to be well-nigh perfect. I will describe it as I make it for my standard Langstroth hive, though it can be figured to suit almost any hive.

The case is simply a shallow box made of ⅞-inch stuff. The sides are nailed to the end pieces. It is 4⅝ inches deep, 14 inches wide, and 18⅛ inches long, inside measure. It is intended to hold 32 4¼x4¼x1¾ sections without separators. Being the same size of the top of my standard Langstroth hives, it sets on them with a square joint, and needs no over cap or super. The case has two saw-cuts all around it on the inside, the lower one being 3-16 of an inch above the bottom edges of the case, and the upper one 3-16 below the top edges of the case, so that the space between the two saw-cuts is just 4¼ inches, and will just take the sections between them. The saw-cuts are ⅜ of an inch deep. Of course the saw-cuts are made when the material for the cases is being cut out by machinery. At the bottom of the case strips of tin ½-inch wide and 14 inches long are slipped into the saw-cuts at the ends of the case and nailed through the wood and tin; this holds them firmly, and leaves the tin to project ⅛ of an inch as supports for the sections at the ends of the case.

The case is divided into three divisions lengthwise, and pieces of folded tin ½x1 inch are nailed in the saw-cuts at the proper places to support three partitions in the cases. The partitions are scant ⅜ of an inch thick, and each partition is made in two pieces. I cut the bottom pieces 3½ inches wide, and the top pieces ¾ of an inch wide, so that one wide and one narrow piece, when put together, makes the partition 4¼ inches wide. Both the broad and narrow pieces of the partitions have tin-rests ⅜ of an inch wide nailed to one of their edges. To fill the case with sections, place the broad pieces of the partitions in the case—tin rests down—the ends of the partitions resting on the tin-supports at the sides of the case, at the bottom. Fill the case with sections and put the narrow pieces of the partitions into place between the rows of sections. Let these be a little scant in width, so that the tin supports will come flat down on the ends of the sections.

To make the case invertible, slip pieces of folded tin in the saw-cuts right over the ends of the partitions, and a strip of tin in each of the saw-cuts at the ends of the case.

I claim as new and original in my improved case the following: First, the saw-cuts extending all around the case at the top and bottom of the sections; second, the partitions made in two pieces, each piece having a tin-support nailed to one of its edges, and the mechanical combination by means of which the sections are confined in a central position in the case. The idea of a shallow space at the top and bottom of the hive or case is original with myself, though the idea is original with others also. The case I have described is the nicest working thing I ever handled in the apiary.

Christiansburg, δ Ky.

For the American Bee Journal.

The National Bee-Keepers' Union.

W. Z. HUTCHINSON.

MR. EDITOR:—Your remarks, on page 131, in regard to what has been done, and will be done, by the National Bee-Keepers' Union, reminds me of something that I ought to have said long ago. At the Detroit Convention some member (I think that it was Mr. Barber), in open convention, said that the reason why more did not join the Union was because of Article IV of the Constitution. No one seemed to take notice of what he said, and no explanation was asked or given.

At the noon intermission I questioned several as to what was meant by the objection, and learned that they objected to the clause which stated that the officers should "cause such assessments to be made upon all the members as may become necessary for their defense." Said they: "We do not propose to give the officers power to assess us for any amount. We are able to pay the assessments to the amount of perhaps thousands of dollars; if we are not *willing* to pay some large assessment, it *can be collected* of us, and we do not propose to give the officers any such power to claim our property, especially so when A, B, and C, who join the Union, and enjoy its protection, are perhaps possessed of no property that can be claimed by law."

I explained to them that, as I understood the matter, the payment of assessments was entirely at the option of each member, and their non-payment simply excluded him from the Union and the enjoyment of its protection; that the joining of the Union, the payment of dues and assessments were all voluntary acts; and that the joining of the Union did not give *it* any *legal* claim upon the property of its members. So long as a man pays his dues and assessments he is a member, and entitled to protection; when he tires of paying he can stop, and is no longer a member, and that is all there is to it. "If this is true," said my hearers, "then there should be an explanation given of the matter, as hundreds are kept out by reason of this very clause." Was I correct?

Rogersville, δ Mich.

[You were quite correct. The Union is a voluntary affair. To remain a member requires 25 cents a year annual dues, and to pay the assessments called for. If the assessments or dues are not paid within the specified time—membership ceases; all claims against former members are lost, and all claims to the protection of the Union are dissolved. Annual dues will be called for on July 1, 1886, and probably another assessment of $1 at the same time. It is not intended to have more than one assessment a year, unless some urgent case should make it necessary, and then there are but few who would not cheerfully respond to a call for an extra dollar.—ED.]

For the American Bee Journal.

Patents on Bee-Appliances.

J. E. POND, JR.

There is a feeling among bee-keepers generally that patents on bee-hives and appliances savor somewhat of humbuggery; this is perfectly natural, as there has been in days past, fully as many swindles perpetrated in this direction as in any other branch of trade, and any mention of patents in connection with the apiary is viewed with suspicion. This being the case, it should not be considered strange, that when a newly-patented hive is offered to the public—coupled with the claim that it is so far superior to all others in use, as to leave them completely in the shade—that such hive, and its claims to both merit and patentability should be discussed and criticized; and I see no reason (though some others seem so to do) why the Heddon hive—so-called—should not be submitted to such a test; and I propose to discuss this hive, not as regards its claims to merit, for of that I know nothing; it has yet to be tested by use, and by such use only can its merits be ascertained. Its claims to originality and newness, therefore, will form the subject matter of this article.

In the first place, in order to discuss the matter intelligently, it is desirous to know what Mr. Heddon's hive is.

As I have never seen it, I can only judge of it from his own published description, and the claims filed in the United States Patent Office. From these, I find that it is a shallow outer case, with either a fixed or movable bottom-board, capable of being tiered up to any desired height, with holes in the sides in which to place screws for the purpose of keying up either brood or section frames in order that the whole may be reversed without displacing the contents; this case being made of stock of varying thickness. The brood department of this hive contains eight close-ended frames (but no special claim is made in regard to that particular number). Each outer case is like every other, and is intended that all shall be exact duplicates; the cases intended for surplus storage are filled with sections either in wide frames when used for surplus comb honey, or with ordinary brood-frames when used for extracting. There are some other peculiarities connected with this hive, such as a slatted honey-board, a peculiar formation of cover, etc., that I believe are deemed by Mr. H. of some importance, but as they have been publicly described by him, and were put in general use several years ago, they cannot be honestly claimed as new and patentable.

Now the question naturally arises, what is there new and that can be the subject of a valid patent, in the hive above described? I say "*valid* patent" for the reason that while patents are easily obtained, the Government only protects those that are susceptible of being proved new, original and useful. How will the Heddon hive stand this test? What is there new in a shallow outer case capable of being tiered up to any height; and how far different is it from the Simplicity hive of Mr. A. I. Root? The only difference I can find is in the depth (it being shallower), and that the ends, sides, and bottom are composed of wood of different thickness. Does it require invention to make one box deeper than another, or to construct its sides from lumber ⅛ or ¼ of an inch thicker or thinner than its ends? Even if so, Mr. Bingham has used a shallow hive for years. In what do the frames described differ from those originated years ago by Mr. Quinby? both are close-ended, and both are reversible. What is there new in the idea of keying frames tightly into an inner case? Such keying has been made use of in my own apiary for years. These frames are not only reversible singly, but by being keyed tightly in the outer case, they can all be reversed at once. Is this idea new? Mr. J. M. Shuck has advertised and used an invertible hive for years. His hive is also made with a shallow sectional outer case, capable of being tiered up to any desired height. He uses, however, ordinary hanging frames.

I need not discuss the matter further now. Slatted zinc honey-boards, with bee-spaces between them and the tops of the frames; the claim that two outer cases are required to make one hive, and various other peculiarities connected with the Heddon hive, may demand some explanation hereafter, but the main points are covered by outer shallow sectional cases, and close-end frames keyed tightly into such cases.

In the above I have written of the matter as I understand it. If I am wrong or have stated anything incorrectly, I am desirous of being set right, and ready to make an ample apology. Assuming that I am correct, I ask what is there in the Heddon hive, that is either new or original in the details of its construction, or the subject of a valid patent, either singly or in combination? The question is not now whether the methods of manipulation used by Mr. H. are better than those heretofore used; or whether "my friend" or "my students" deem them more rapid and economical or not. With that matter, as I stated at the start, I have nothing to do. I am desirous of gaining all the information I can in regard to an article of trade, that is claimed to be new and original, and testing that claim, by the "state of the art," as shown in the past history of apiculture; and with my present understanding of the matter, I can see no reason why the wood of which the hive is constructed, or the nails and paint used in its construction are not as susceptible of being patented as the other features described.

It is unfortunate that bee-keepers are inclined to look upon adverse criticisms as being personal; why this is so, I cannot imagine; I, however, can only judge of matters as I find them, and in the criticisms above I have simply made a comparison of Mr. H's details, with those that have been made familiar to us by apicultural history. Mr. Heddon can find no fault with courteous criticisms, and the questions asked in this article, if answered correctly, make the criticism just; if not, correct answers given to them will set the public right by furnishing such information as is called for.

Foxboro, Mass.

[The Bee Journal does not propose to discuss the *validity* of any patent—the U. S. Courts are the ones to decide that. Until these Courts have decided otherwise, every law-abiding citizen will respect a patent granted by the U. S. Government. Does not the following from Dr. Tinker pretty clearly answer Mr. Pond?—Ed.]

For the American Bee Journal.

Sectional Brood-Chamber Hives.

DR. G. L. TINKER.

The remarks of Mr. Heddon, on page 165, call for an explanation, although I do not propose to enter into anything like a discussion at this time. The hive I have described on page 153, Mr. Heddon claims as his invention. This claim will probably bring to an early settlement his rights under his patent, and I feel sure, if it is just, it will be finally conceded.

The general welfare of the fraternity, unalloyed by acrimonious strife and contention, would seem to demand such settlement. I should be pleased to see the harmony and good-will that prevailed at the late Detroit Convention spread like a contagion among bee-keepers until all ill-will and disaffection is swallowed up in kindness, and a disposition to do right and accord exact justice without prejudice and without reserve. Let us be a great brotherhood of bee-keepers, not only in name but in fact.

Now the question in every mouth is, what are Mr. Heddon's rights regarding his new hive and system of management? In the past few weeks I have had lengthy correspondence with him on this subject, and find him disposed to do and to ask only what I am prepared to acknowledge is just and right.

First, he has invented a new hive of *original features* and *original construction*, having a sectional brood-chamber in horizontal divisions, each being invertible and provided with movable-comb frames. His patent covering the above construction is undoubtedly valid.

2. In his book, "Success in Bee-Culture," he has presented a new system of management involving what have everywhere been conceded, "my principles" of procedure in bee-culture.

3. Although he may not be able to control by patent every construction of hives whereby his new principles may be carried out in practice, still, all will feel, who do practice them, that they are profiting by what he has promulgated, if not directly by what he has invented.

The above are simple facts that cannot well be denied, and under this circumstance it only remains for each one to decide if they shall make use of the new system or not. If they do, it will be only fair to obtain a privilege to use or to manufacture, as the case may be, whether it be a hive covered by Mr. H's patent or one that may be used in the same manner. It is, of course, understood that whoever purchases a hive of any manufacturer, purchases the right of use with it; and as my hive described on page 153 cannot well be operated except by the new system, I have purchased the right of manufacture under the Heddon patent.

On March 15 to 18, I transferred five strong colonies into these hives, and I am highly pleased with them. They give unmistakable promise of all the advantages I have from the first conceived of such a hive. It opens up new possibilities to the practical bee-keeper, new methods and new hopes. It may cheapen our products because of larger production, but more honey will be consumed in lieu of other sweets, while the cost of production will be reduced to the lowest figure. Though we have hosts upon hosts of bee-keepers in the land, I believe the present outlook for their general prosperity has never been so promising.

New Philadelphia, O.

For the American Bee Journal.

How I Winter my Bees.

D. L. SHAPLEY.

I use the Quinby hive and the Quinby standing frames, the outside dimensions of the hive being 22x24 inches, but the majority of them I have made 24x26 inches, as it gives more space for packing for wintering. The height of the hive is 18 inches; the covers are roof-shape with 3 rafters, and project over the front of the hive 6 inches. The outside dimensions of the frames for the brood-chamber are 17⅝x11⅜. I use 7 or 8 frames for each colony of bees, according to the size of the colony. I use a ½-inch board with cleats on it, on each side of the frames, and the whole is held together with a cord; that leaves 3 to 4 inches on each side for packing, and 6 inches on top. During the winter of 1882-83 I used oats chaff, and out of 16 colonies I lost only 1, and that by carelessness or ignorance. It was a late swarm, and did not have its hive over two-thirds full of comb, so I took a frame well filled with honey from another colony and gave it to them, and on April 1 I examined them and found them about out of honey. I then gave them, as I thought, sufficient to carry them through, but about May 1 they starved to death.

During the winter of 1883-84 I used newspapers from 2 to 4 in thickness at the ends of the frames, and used more straw with the chaff; the chaff alone collected too much moisture the winter previous, especially in those hives that were packed the most solid. I found I had to be very careful to pack the chaff but very little. I did not lose any bees that winter.

For the winter of 1884-85 I packed the hives with oats straw, cut with a straw-cutter, and used paper such as is used to line buildings with. I wintered 22 colonies and did not lose any in wintering. One was queenless, and the roof of one hive leaked, the comb molding badly, and consequently the colony was very weak; they were robbed the last of April. The colony that was queenless was the only one that showed any signs of diarrhea, and I attributed that to their being uneasy on account of the loss of their queen. There was a large number of bees that died in this section of the State, and I think my success remarkable, and cannot account for it in any way, except as I packed them for winter.

I have now 40 colonies similarly packed, except that I have this winter raised the brood-frames about 1⅛ inches from the bottom of the hive to leave more space for dead bees, etc. Winters previous to this, every week or ten days I cleared the entrances to the hives, of dead bees, with a wire hook; this winter I have cleared them but twice—the last time about two weeks ago, and I found in many of the hives from 1 to 3 or 4 young bees dead (that were nearly ready to hatch), showing that there is now brood in most of the hives. There is no signs of diarrhea yet. I contract the entrances as soon as I think they have brood in the hives. I place a board 12 to 14 inches standing over the hive-entrance; it is nailed to a V-shaped piece on each side, and if pains are taken to set it close up to the front of the hive, it effectually prevents the entrance from being stopped up, especially if a little snow is put around the bottom. I think that if H. C. P., in Query, No. 196, will try this, he will find it will be satisfactory.

Randallsville, ⊙ N. Y.

For the American Bee Journal.

Prevention of Swarming, etc.

6—WM. MALONE, (5-31).

I think that I have discovered how to prevent bees from swarming while working for comb honey. It is as follows: Get the lower story full of bees and brood, then select a comb of unsealed brood and eggs and place it in the front end of the upper story. Put in 3 wide frames filled with sections and starters, with tin separators next to the brood-comb; then a division-board next that must fit closely so that the bees cannot get behind it. Then cover all up snugly, and as soon as you find the first frame of sections sealed, take it out, slip the other 2 up to the brood-comb, put in the empty one next to the division-board, and so on.

After the colony gets stronger give them another wide frame, but not too fast; I seldom use more than six at a time. When the brood is all sealed in the comb, exchange it for one filled with eggs; and never leave a frame of sections in after the honey is sealed. The secret is to keep a frame of unsealed brood and as much unsealed honey in the hive. If honey is coming in freely you will take out one frame every day, and some days more, after you get a start.

I have only one chaff hive, and I have used it for producing comb honey for four years, and I have never had a swarm from it. I believe I could manage 50 with the same results. I also believe that we will overcome this swarming difficulty yet. I would like to have others try this plan and report results.

In November I buried 9 colonies of bees in clamps. About Dec. 20 it caved in, and I did not notice it until Jan. 5, 1886. The hives were in water 6 inches above the entrance. Snow was on the ground, and a north wind blowing on the day I took them out.

Twice the mercury was 26° below zero in January, and they had no flight until Feb. 7. The hives were under snow for 3 weeks, and the entrances frozen full of ice. They are all alive and in splendid condition.

In reply to C. W. Dayton, on page 725 of the AMERICAN BEE JOURNAL for 1885, I would say that I did increase my apiary from 5 colonies to 31; I did get 965 pounds of honey; and I am going to winter my bees, too. I can prove it if need be. Last year was the best for honey that I have ever seen, taking the season through, from April 15 to Oct. 15.

Oakley, ♀ Iowa.

For the American Bee Journal.

Preparing Bees for Winter.

WM. M'KENZIE.

I prepare my hives in the early part of the fall, before the bees begin to cluster for winter; of course, always knowing their condition previously as to strength of the colonies and the amount of stores. In preparing the hive itself I use from 3 to 4 inches of fine, dry basswood shavings, which makes a good absorbent of moisture. In the morning of the day that I intend putting the bees into their winter quarters, I raise the hive an inch from the bottom-board (which I have found from practical experience to be of great value in keeping all moisture from the hives), and giving them at the same time plenty of fresh air, without causing any current of air through the hive, or taking away from its warmth, which are three very essential factors in successful wintering.

The bee-cellar is prepared as follows: There are two ventilating tubes, one leading under-ground from the outside about 30 feet from the cellar; the other leading from the cellar about a foot from the floor, up through two stories into a chimney above, by which means there is a constant current of air passing in and out of the cellar; and in placing the bees in the cellar I have the hives raised about 2 feet from the floor, and have it covered with 2 or 3 inches of dry sawdust, which prevents any jar or noise, when it is necessary to look at them during their confinement.

In taking them from the cellar in the spring, I place them in rows on the south side of the house, and between and at the back of the hives I put plenty of hay, which I have found of decided benefit on account of the cold nights we have to contend with in this section of the country, and especially after taking the bees from their warm winter quarters. It is also a great preventive against "spring dwindling," to which our bees are so liable if not kept sufficiently warm during the changeable and trying time of early spring.

By the above method I have successfully wintered my bees for the last 2 years, and now they are in fine condition; there is no appearance of moisture about the hives, and the bees themselves are hanging down below the frames, and in many cases touching the bottom-boards.

Port Burwell, Ont.

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office in parts. Price, $3.00.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Local Convention Directory.

1886. *Time and place of Meeting.*

Apr. 6.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburg, Ind.

Apr. 6.—N. E. Kentucky, at Covington, Ky.
Alex. W. Stith. Sec., Portland, Ky.

Apr. 7.—Wabash County, at Wabash, Ind.
J. J. Martin, Sec., N. Manchester, Ind.

Apr. 8.—Southern Illinois, at Duquoin, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Loss from Starvation.—Messrs. Redd & Wilburn, Wewahitchka,⊸ Fla., on March 12, 1886, write :

Bees have done poorly here so far. Starvation has been the main cause of the loss, which is about one-half, anyway.

Joyful Bees.—J. M. Jenkins, Wetumpka,⊙ Ala., on March 22, 1886, says :

My bees are having high old times now—have been bringing in pollen since Jan. 14, whenever the weather was favorable. All came through in good condition except 2 nuclei colonies in full-sized hives (an experiment). They "friz."

Bees in Fine Condition.—M. M. Aldrich, Geneseo,⊸ Ills., on March 19, 1886, says :

My bees are in fine condition. I took them out of the cellar to-day, and within 5 hours after being placed on the summer stands they brought in pollen. I am one of those cripples that Mr. Otis N. Baldwin mentioned on page 23.

Loss of Bees in the South.—G. W. Demaree, Christiansburg,♂ Ky., on March 18, 1886, writes :

We are having nearly a summer temperature here. Bees are carrying in pollen, and the earth is turning green. I think it is too early to last long without a backset. The rainfall has been unusually light so far this spring, and the way is not clear yet. I now expect to attend a convention of bee-keepers at Franklin, Ind., April 3. I now believe that the loss of bees in the South will be greater than in any winter since 1869. Light scattered stores, with unusual cold weather did the work. I have not heard of the loss of a single colony that had plenty of stores properly located in the brood-nest.

How to Feed Bees.—J. H. Andre, Lockwood,♀ N. Y., writes :

The season for feeding bees is at hand, and all colonies, no matter how well they may be supplied with natural stores, should receive from one to two gills of syrup on each day warm enough for them to fly, until the flowers afford enough to supply their daily wants, which, in this latitude, is about the time that the apple trees begin to blossom. For such feeding I have found the following way the most convenient: Take a box 6 inches square and 4 inches deep, with a loose cover, and cleats across the top to keep it from warping. Saw a notch in one side of it 2 or 3 inches deep ; bore an inch hole in the back side of the hive, tack on the box so that the hole and notch correspond, and have a plug in the hole. Put into the box a comb containing syrup, pull out the plug and put on the cover.

Thornless Honey-Locust.—W. C. Lyman, Downer's Grove,♂ Ills., desires replies to the following questions:

I. Is there in Michigan or elsewhere, a variety of the honey-locust tree that is thornless ? Does seed from the common honey-locust ever produce trees that are thornless ? We have here a very fine, strong growing locust that is much like the common thorny kind, except that it is without thorns. The bees work upon it as they do on basswood. It is a beautiful shade-tree, and I should be pleased to find out just what it is.

[There is a thornless variety of the common honey-locust, *Gleditschia triacanthos*, which Gray calls variety inermis. It is substantially like the thorn-bearing variety, except in the absence of the spires. I presume that the tree referred to by Mr. Lyman is this thornless locust. It would be well to sow the seed, and by selection, if necessary, secure this beautiful tree free from the thorns.—A. J. Cook.]

Working on Corn-Meal.—Wilson Sherman, Chester Centre,⊙ Iowa, on March 20, 1886, writes :

Winter is past and spring is here in Central Iowa. My bees had several flights during February, when they needed it. On March 16, I placed my colonies on the summer stands to stay. My bees were wintered without loss in a cellar where the temperature was kept between 48° and 52° above zero. From 21 colonies there was not a pint of dead bees to be found. My colonies are all very strong. I have spread 3 or 4 bushels of corn-meal on boards for them. They work so thickly on the meal that it really looks black. I think they will be able to get natural pollen in a day or two from maples.

Encouraging Prospects.—E. Armstrong, Jerseyville,⊸ Ills., on March 19, 1886, says :

For all the severe winter and spring that we have had, my bees, and others as far as heard from in this locality, have come through in good condition, and with but very little loss. This has been one of the best weeks at this time of the year, for the little workers, that I have ever known. The weather has been delightful. Maples are in full bloom, and they are just alive with the bees from morning until night. It makes one feel good to hear the hum of the bees once more, after their long confinement. Our prospects were never better for a good season. The white clover—our main dependence—is not injured at all, and is looking fine.

Fine Weather—Weak Colonies.—Alex. W. Stith, Portland,♂ Ky., on March 20, 1886, writes :

I commenced the winter of 1885-86 with 80 colonies of bees in fair condition, and have lost 8 colonies, mostly by starvation, with a limited amount of honey in the hives. My loss was mainly caused by the bees being clustered, during the extreme cold weather, away from the main bulk of honey. The weather for the past 3 weeks has been the finest I have ever seen in March, the mercury being 78° in the north shade. My bees, for the past few days, have been gathering pollen from elm, but they are rather weak for this time of the year. The past extremely cold winter has caused the death of a large portion of bees from most of my colonies.

Drones Flying.—W. J. Roberts, Keokuk,⟜ Iowa, on March, 18, 1886, says :

My bees, wintered on the summer stands, have come through the season of cold, snow and ice all right. I use a hive made on the Langstroth plan, to hold 12 Gallup frames. The bees are bringing in the first pollen of the season. I am not old enough in the business to say the fact is a remarkable one, but I was surprised to see a large, healthy-looking drone flying about with a very happy and contented buzz.

The Wintering Problem.—F. M. Taintor, of Coleraine,⊸ Mass., writes:

How to winter bees successfully has been to bee-keepers their most vexatious problem, and it may be safely said that failure in bee-keeping is owing chiefly to defective wintering. We cannot expect very much from our bees during the summer unless we commence the season with strong colonies, and to insure this condition they must be wintered well. While there is much to learn yet about wintering bees, I hope the time is not far distant when we can all winter them without loss. The fitting of the colonies for winter should be borne in mind during the entire season, and they should be prepared for winter early—certainly by Oct. 1, and before if they need feeding—so they will have time to evaporate the honey and seal it before cold weather sets in. Many colonies are lost that are fed so late as not to have time to evaporate the honey, and it sours and kills the bees. There are also cellars that are damp and cold where bees are wintered. Objections to wintering in a cellar often arises from a lack of understanding of some of the requisites. The hives are often placed so close to the wall that they absorb moisture and become moldy and unhealthful; sometimes they are placed on shelves attached to the sleepers overhead, and are thus subjected to every jar from the room above them with bad results. Dry, pure air and a proper and even temperature are the prime essentials in successful wintering; and these cannot be so perfectly controlled out-of-doors as in a suitable cellar. The room should be partitioned off with matched lumber, so that it will not admit a ray of light, and be kept as nearly a temperature of 45° as possible. I find them most quiet at 45°.

Gathering Pollen and Rearing Brood.—Louis Werner, Edwardsville, ♀ Ills., on March 18, 1886, writes:

My apiary fronts to the south. I have just finished examining my bees, and they are in fine condition. They have been working on soft maple and red elm for the past 5 days, and are rearing brood. I have some colonies full of brood. I have never seen a finer spring than we are having now, and the outlook for a good season is excellent. I have wintered 91 colonies on the summer stands. I found one that was queenless; the others are all right.

Working on the Maples.—J. G. Norton, (32-50), Macomb,♂ Ills., on March 18, 1886, says:

My bees have come through another hard winter without loss, and are in fine condition. They were all working on maple to-day. White clover looks the finest I ever saw it at this time of the year.

Perspicuity in Writing.—S. D. Webster, Kirkwood,♂ Mo., says:

On page 153 I find the following sentence: "That the flowers of many species of the vegetable world do not require insect aid in the process of fecundation is evident; and that any species of the melliferous flora is absolutely dependent on the insect tribes for their fecundation, I am not prepared to accept as an axiom from which deductions may be drawn that harmonize with the principles of sympathetic reproduction as unfolded in cosmogony." If there is one thing, Mr. Editor, that I admire more than another it is clearness of expression; and I always feel under obligation to your correspondents when they so forcibly express their opinions. I had some trouble, when a boy, from a boil; and some more trouble with another boy about whether it should be pronounced "bile," which led to a reference to the "Unabridged." There I found that a "boil" "was a circumscribed, sub-cutaneous pustule, characterized by a circular-pointed tumor, suppurating with a central core; a perencutus." I do not exactly know yet what a "perencutus" is; but the lucidity of the definition was so striking as to cause it to cling in my memory through all these years. If we cannot have the principles of sympathetic reproduction either of the flora or hymenoptera harmonized when cosmologically unfolded, we do not want them at all.

Successful Wintering of Bees.—Charlie W. Bradish, Greig,♂ N. Y., on March 17, 1886, writes:

I have kept bees for 15 years, and can say that the season of 1885 was the poorest season for honey during that time. I had wintered 90 colonies out of 93, sold 12, and united some weak ones, so that when the honey harvest began I had 70 colonies to commence with. I increased them to 128, and took 2,500 pounds of comb honey, 500 pounds of extracted honey, and 1,800 unfinished sections. I put my bees into the cellar in November, and they are wintering well. I have lost only 7 colonies in 8 winters, and 4 of them were destroyed by mice. I shall move about 10 miles from here, this spring, to a better location.

Merry Bees.—I. J. Glass, Sharpsburg,⊙ Ills., on March 22, 1886, says:

I carried my bees out of the cellar last Friday, after a confinement of 105 days. Out of the 61 colonies I found one that had starved, and one had deserted its hive and left plenty of stores. The day was pleasant and the air was soon filled with myriads of merry bees taking their first flight after so long a confinement, and very little signs of disease was noticed, and by the middle of the afternoon they began to carry in pollen. On examining them at night I found that 2 colonies had absconded, one of them leaving considerable brood and a fair quantity of stores. The same day, only a short distance from here, a swarm of bees passed over some workmen, who, following them some distance, failed to stop them. To sum up: I lost one colony by starvation, and 3 from 'swarming out," leaving 57 colonies in good condition.

Wintering Bees in a Chimney.—Geo. H. Hayes, Kittery, ♀ Maine, on March 16, 1886, writes:

My bees are all in the cellar, and are quiet. If it continues to be warm I shall let them have a flight. They have been in the cellar since last November. I weighed them last Saturday, and they had eaten from 6 to 7½ pounds per colony, and have enough to carry them through all right. I have tried many kinds of hives, but the last change I made was to cut the 12-inch Quinby hive down to 10 inches, and filled the ends, so I now have a standard Langstroth hive, and I like it. I have lost no bees yet, neither do I expect to. A man came to 'my house a few weeks ago and wanted me to get my bees out of his chimney. They are all right in the top of the chimney. There is a board nailed on the top, with a 6 inch hole in it. The bottom is all open with a fire-place in the lower story. The people do not use the chimney. It has been 21° below zero at times, and below zero for a week at a time, and they have come out so far all right. How is that for upward ventilation? I do not believe in it, all the same.

Upward Ventilation in Winter.—W. J. Davis, Youngsville,♂ Pa., on March 22, 1886, says:

Bees have had a good flight, and have come through the winter in fine condition, with very small loss, caused by loss of queens. I cannot winter bees in good condition in this locality, without upward ventilation. I am also satisfied that the quality of the bees, as well as their stores, has much to do with successful wintering.

Hutchinson on Hibernation.—Wm. F. Clarke, of Guelph, Ont., writes:

Mr. Hutchinson has apparently made a strong point against hibernation, but has not killed the theory. May not bees require to cluster in order to hibernate, while other insects can do it singly? It is quite certain that bees never hibernate except in the cluster. I am sorry that Mr. H. has taken up and put on the cast-off garment of positivism belonging to Prof. Cook, and says, "Bees never enter this state." He should add, to make the sentence right, "in my opinion." Mr. Hutchinson should also know that it has all along been contended that "bees must have food and warmth," in order to their kind of hibernation. Starved and chilled bees do not hibernate, in my opinion, as I have stated more than once in the BEE JOURNAL.

Shallow Hive in Sections.—Fayette Lee, (65-124), Cokato,⊙ Minn., on March 20, 1886, writes:

A Mr. Carlson invented a sectional hive 12 years ago, 14x14 inches, and 5¾ inches deep, containing 9 frames, 5x12. The hive consists of from 2 to 6 stories which may be interchanged at pleasure, those for brood and surplus being just alike. It is a good hive, for either comb or extracted honey, but is rather an expensive one to make. I have never seen it mentioned in the AMERICAN BEE JOURNAL. I always put my bees into the cellar before frost, and never lose any of them. In my letter, on page 137, the 4th line should read: "Upper story for extracting," instead of first story, etc.

Bees in the finest Condition.—A. J. & E. Hatfield, South Bend, ♂ Ind., write:

Our 250 colonies of bees are still in the cellar, in the finest condition.

Convention Notices.

☞ The bee-keepers of Manitowoc and adjoining counties will meet at Kiel, Wis., on March 25, 1886, for the purpose of organizing a bee-keepers' association. J. H. ROBERTS.

☞ The Wabash County Bee-Keepers' Association will meet at the Court House in Wabash, Ind., on Wednesday, Apr. 7, 1886, at 10 a.m. All bee-keepers are invited. J. J. MARTIN, *Sec.*

☞ The bee-keepers of Stark and adjoining counties are earnestly requested to meet at Grange Hall (over Farmer's Bank), Canton, O., on Tuesday, Apr. 13, 1886, for the purpose of effecting a permanent organization. MARK THOMSON, *Sec.*

☞ The Southern Illinois Bee-Keepers' Association will hold its 3d annual convention in Teague & Harris's Hall at Duquoin, Ills., on Thursday, Apr. 8, 1886, at 10 a.m. A general invitation is extended. F. H. KENNEDY, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Kansas City, Mo., on Apr. 29 and 30, 1886. It is desired that this meeting shall be better than any of its predecessors. Essays will be read on the leading subjects in bee-culture, which will be announced as soon as arrangements are completed. Let all who have bees, queens, fixtures, etc., bring them if possible. Due notice will be given in regard to a hall. P. BALDWIN, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m. M. E. DARBY, *Sec.*

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.
B. F. CARROLL, *Sec.*

☞ The next annual meeting of the Western N. Y. and Northern Pa. Bee-Keepers' Association will be held at Randolph, N. Y., on May 4, 1886.
A. D. JACOBS, *Sec.*

☞ The Progressive Bee-Keepers' Association will meet in Macomb, Ills., on Friday, Apr. 9, 1886, afternoon and evening. Essays will be read and an address will be given by Rev. E. L. Briggs, of Wilton Junction, Iowa. Other speakers of note will be present. It is desired that all interested in bee-keeping should be present.
J. G. NORTON, *Sec.*

☞ The DesMoines Co. Bee-Keepers' Association will meet at the Court House in Burlington, Iowa, on Tuesday, Apr. 27, 1886, at 10 a.m. Any articles sent to the President, Mr. Geo. Bischoff, at Burlington, for exhibition, will be well cared for and returned or sold, as the sender may direct. A cordial invitation is extended to all interested in bee-keeping. JOHN NAU, *Sec.*

◆

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Mar. 29, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2-lb. sections, 9@12c.
BEESWAX.—24@26c. per lb. Not much offered.
R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.
BEESWAX.—27@28c.
MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.
BEESWAX.—25 cts. per lb.
BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.
BEESWAX.—Quotable at 20@23c., wholesale.
O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—Stocks are being slowly reduced, some sales reported at 13 and 14 cts., the latter being for best honey in 1-lb. sections.
BEESWAX.—Scarce at 25c.
M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extracted in barrels, 5@5½. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices.
BEESWAX.—Firm at 22½c. for prime.
D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.
BEESWAX.—In demand at 22@25c. for yellow.
C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.
BEESWAX.—Scarce at 25c.
A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted, 5@6c.; Southern, 3½@4c.
BEESWAX.—23c.
CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The supply of choice comb in sectons is not equal to the demand. We quote: White 1-lb. sections, 16@18c.; common, 14@15c.; dark, 12@14c. White extracted in kegs or barrels, 8@9c.
BEESWAX.—Scarce at 25@26c.
A. V. BISHOP, 142 W. Water St.

◆

Golden Rules for successful advertising, are these: 1. Attractive display. 2. Salient points clearly stated. 3. Repetition. Don't spend all your money in one insertion. 4. Choice of the Paper which reaches the people you want to reach. *These rules never fail.*

◆

Those who have Bees, Queens or Supplies to sell should *at once* make it known in our advertising columns. Look out for a good trade, and an early one, too. Those who advertise will do the business—others will look on, be discouraged, and *keep* their stock. Our columns are open to all honorable dealers, and should be used liberally. Advertisements may be inserted weekly, alternate weeks, or once a month, as may be desired. See "Rates" on first page.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

Frank Leslie's Popular Monthly.—The prolonged winter made ice-yachting possible even into what is generally regarded as spring, so that the attractions and perils of this peculiar amusement are still fresh in the mind. Mr. Stephens, in the April number of FRANK LESLIE'S POPULAR MONTHLY gives the history of these vessels, their present popular forms, and describes vividly the exhilerating sensations of a spin over the glassy ice in one of these fleet vehicles. Mr. F. B. Mayer takes us from the ice and its pleasures to the balmier Chesapeake, and introduces us to the old towns and manors of the western shore of Maryland, giving illustrations from his own artistic pencil. Also many other very interesting articles.

Alsike Clover Seed.—We can furnish Alsike Clover Seed at **$8.50** per bushel—or **$2.25** per peck. These prices will take the place of those published in our Catalogue, until further notice.

* * *

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

* * *

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

* * *

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for $1.30.

* * *

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.**, in either **English** or **German.**

Advertisements.

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo.
4A1y

DISCOUNTS on early orders for Foundation. Samples free.—C.W.Phelps & Co.,Tioga Ctr.,N.Y.
13W2t

200 **COLONIES** of Choice Italian Bees for Sale. For terms, address
W. J. DAVIS, (box 148),
13W9t YOUNGSVILLE, PA.

FOR SALE.—30 Colonies of Italian Bees—choice stock and in fine condition. Single colony $5.00. Discount on orders of 5 or more. Three-frame Nuclei (full-sized frames), each, $3.00.
Address, **REV. J. E. KEARNS,**
13W1t MORNING SUN, IOWA.

FOR SALE. **—30 Colonies Italian** BEES in good condition on 7 Langstroth frames, in shipping-boxes, $4.50 ; or shipped in Parker Chaff Hives, $6.50 per colony. Purchasers for the above can, if they prefer, send their Cash to T. G. Newman & Son, Chicago, Ills.
Wm. Amelaog, Ottumwa, Wapello Co., Iowa.
13W2t

DON'T READ THIS

UNLESS you want to buy BEES at reduced prices. Address, CHARLIE W. BRADISH,
13W2t GREIG, Lewis Co., N. Y.

60 Colonies of Bees For Sale.

FOR particulars, call on or address,
A. L. EDWARDS, Skaneateles, N. Y.
13Wtf

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf J.VANDERVORT,Laceyville, Pa.

LOOK HERE!

100 **COLONIES of ITALIAN BEES** at **$6.00** each. **50** fine Brown Leghorn hens at $1.00 each.

Eggs for Hatching.—White L., Brown Leghorns and S. S. Hamburgs, at $1.50 for 13 eggs ; R. P. Games, at $2.00 for 13 eggs ; Rouen Ducks, at $2.50 for 13 eggs. Address,
12A13t WM. LOSSING, Hokah, Minn.

BEES, QUEENS,
AND
APIARIAN SUPPLIES.

First-Class Goods at Low Prices.

A FINE LOT OF ITALIAN BEES
For Sale Cheap.

Send Postal Card for Illustrated Circular and Price-List.

J. C. SAYLES.
13Dtf HARTFORD, WIS.

BEE-HIVES, SECTIONS,

Foundation & Apiarian Supplies.

Having a large stock of sections on hand we will furnish them in crates of 500 each, (less than 500, ¾ ct. each), size, 4¼x4¼x1⅞................... $2 50
From 1,000 to 5,000—per thousand............. 4 50
" 5,000 to 10,000— " 4 25
" 10,000 and upwards " 4 00
4½x4½, at same prices. All V-grooved.

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices.

For description and prices of the **SUCCESS HIVE**, send for Price-List. Estimates given on all other Hives.

QUEENS AND BEES FOR 1886.

We make a specialty of rearing the **ALBINO QUEENS AND BEES.** Price-List free.

S. VALENTINE & SON, Hagerstown, Md.
44Ctf

ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*
9W1y J. M. JENKINS, Wetumpka, Ala.

200 COLONIES
OF
ITALIAN BEES

FOR SALE.—In Langstroth hives, wired foundation frames. Very low. Also 300 of our Improved Sectional Honey-Cases used with or without separators. Circular free.
A. J. & E. HATFIELD,
13Wtf SOUTH BEND, IND.

BEAUTIFUL

FOUNDATION and very choice all-in-one-piece SECTIONS, V-groove—Wholesale and Retail, and exceedingly cheap. Send for samples and Free Price-List of everything needed in the apiary.
M. H. HUNT, Bell Branch,
13Wtf (Near Detroit), Wayne Co., MICH.

Sections and Berry-Baskets.

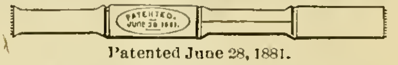
WE, the *original inventors* of the one-piece sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
13W13t MILTON, Trimble Co., KY.

DO YOU LOVE
Poultry, Cage Birds, Pet Stock?

SEND 5 cents for copy of illustrated monthly, telling you how to breed, feed and care for them ; what to do in time of sickness ; the best and latest remedies, &c., &c. Only **25 cents** per year. Address,
GUIDE AND FRIEND,
13W2t CLAREMONT, Surry Co., VA.

40 **COLONIES** of Italian Bees in Langstroth hives—$6.50 each, 5 for $30. Queens from Hall & Hayhurst. Satisfaction guaranteed.
E. A. GASTMAN,
13W1t DECATUR, ILLS.

Prices Reduced.
THE "BOSS" ONE-PIECE
SECTIONS.



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WE have REDUCED the PRICES on One-Piece Sections as follows :

1-lb. Sections, in lots of 500 to 4,000, **$4.50**
In lots of **5,000 to 10,000,** ℔ 1,000, **$4.00**
☞ For larger orders write for prices. ☜

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., Jan. 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

1869. UP WITH THE TIMES. 1886
Armstrong's Perfection
CROWN HIVE

The brood-frames, honey-rack, and section-boxes are all **Reversible.**

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.

Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.

1886. ITALIAN QUEENS. 1886.
FROM APRIL UNTIL OCTOBER.

UNTESTED, $1.00, per Dozen $8.00. Reared from Imported Mothers. Money refunded if not furnished promptly. Address,
WALTER McWILLIAMS,
9D6t GRIFFIN, GEORGIA.

Bee-Hives and Bee-Supplies,
QUEENS AND NUCLEI.

WE are now ready to fill all orders promptly, at low prices, and guarantee our goods. Send for Price-List free.
B. J. MILLER & CO.,
2D6t NAPPANEE, IND.

DUNHAM AND VANDERVORT FOUNDATION.

WE have a large stock of choice yellow beeswax, and can furnish Dunham comb foundation for brood-comb, cut to any size for 42c. per lb. Extra thin Vandervort foundation, 48c. per lb. We guarantee our foundation to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20 cts. per lb. for sections.
F. W. HOLMES,
9Dtf COOPERSVILLE, Ottawa Co., MICH.

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies ; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.**, a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,
J. P. H. BROWN.
7D10t AUGUSTA, GEORGIA.

IXL EXTRACTORS.

FOR 2 Langstroth, American, or Gallup frames, with gate—**$6.50.** Machines for any size of frames made to order. **Cold-Blast Smokers,** postpaid, **60 cents.** **W. C. R. KEMP,**
7D4t ORLEANS, IND.

FOR SALE.
Italian Queens.

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Untested,	$1.00	$1.00	.85
Six,		5.00	4.50
Tested,	2.50	2.00	1.50
2-fr. Nuclei—untested queen,	3.00	2.75	2.25

Also Bee-Hives, Foundation, etc. Send for Price List. **JNO. NEBEL & SON,**
13D6t HIGH HILL, Mont. Co., MO.

FOR sale cheap.—Safe & 2 gold watches. Will exchange for bees.—I.S.Huckins,BayCity,Mich

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Book and sample latest improved Drone and Queen Trap, by mail,.............................. 1 50
Book and tested queen, any race (from June to October).. 2 00
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BOSS BEE-FEEDER.—Sample and full particulars for 30 cents.—For feeding inside of any hive, without disturbing the Bees. **T. C. WIKE,**
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PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
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SEND Italian Queens, from February to December, untested, for $1.00 each; per dozen, $10.00. Tested queens, $2.00 each. On weekly orders dealers have special rates.

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30 COLONIES OF

ITALIAN BEES

FOR SALE,

In movable-frame Hives.

PRICE from $7 to $10,

according to the number ordered.

Dr. H. N. Rogers, Zumbro Falls, Minn.
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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH ANE MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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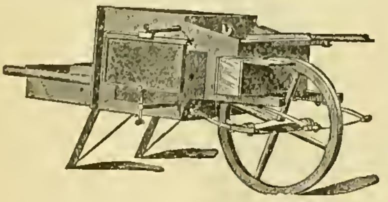

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REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Price, complete, only..............$18.00.

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Largest Bee-Hive Factory in the World.

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

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Job Lot—Cheap!

WE have received a Job Lot of **25,000** One-Piece Sections with square groove, which we will close out at **$4.00** per 1,000, or $2.50 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

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Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ⅓ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

Alley's Drone and Queen Trap.

Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

12,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
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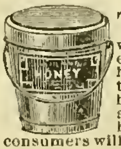
THE AMERICAN APICULTURIST

(ESTABLISHED IN 1883.)

WILL be mailed to any address for 3 months, on receipt of 25 cts. in stamps. **Sample copies free.** Address,
12Atf AM. APICULTURIST, Wenham, Mass.

NEW ONE-POUND HONEY PAIL.



THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. **Circular Free. T. L. VonDorn,** *Omaha, Neb.* **None Better**
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100 COLONIES

OF

ORANGE-COLORED ITALIANS

AND

WHITE-BANDED ALBINO BEES

FOR SALE.

THOSE in want of Bees, Queens, or Apiarian Supplies will do well to send for my 26th Annual Price-List before purchasing. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
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N.B.—The best testimonial I can give, is that my trade has more than doubled in the past 3 years.
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RAYS OF LIGHT, the original Bee and Poultry Journal. Published in the interest of Bee-Keeping and Poultry Raising. J. J. MARTIN & CO., Publishers, North Manchester, Ind. Sample copy FREE. Subscription price **50 cents** *per year.* 11D8t

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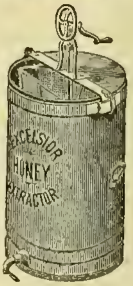
EXCELSIOR

HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	....	$8 00
For 2 Langstroth	"	10x18	"	.... 8 00
For 3	"	10x18	"	.........10 00
For 4	"	10x18	"	.........14 00
For 2 frames of any size,	13x20	"	....	12 00
For 3	"	13x20	"	.........12 00
For 4	"	13x20	"	.........16 00

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BEE Hives and Sections —Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

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FOR SALE.—Italian and Cyprian Bees and Queens (in any quantity), Extractors, Bee-Books, etc. Address, OTTO KLEINOW,
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DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS of the **BRISTOL Bee-Hive,** the Standard Hive of Vermont, **Section Honey-Boxes,** all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers, Shipping Crates,** Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for illustrated Catalogue and Price-List. 46D12t

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THE VICTOR HIVE

IS pronounced by competent apiarists to be the Best Hive for comb honey. It is operated on a new principle, the passage-ways being continuous through perforated zinc to the sections. Our dovetailed White Poplar Sections, with or without side passages, cannot be excelled in accuracy or smoothness. They are as nearly perfect as can be made. Sample of the new sections for 2 one-cent stamps. Catalogue on application.

Address, **DR. G. L. TINKER,**
3Dtf NEW PHILADELPHIA, OHIO.

BROOD-FRAMES.—C. W. Dayton, Bradford, Iowa, will furnish first-class brood-frames of any size, at $1.00 per 100, ready to nail; and will take honey and beeswax in payment for the same.
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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. April 7, 1886. No. 14.

He that Blows the Coals in quarrels he has nothing to do with, has no right to complain if the sparks fly in his face.

◆

An Old House in California, which had been abandoned to several swarms of bees, yielded 900 pounds of honey of excellent quality, so says an exchange.

◆

Mr. J. M. Shuck, of Des Moines, Iowa, has been allowed another patent on his invertible hive.

◆

On page 183, 1st column, in the 17th line from the bottom, the word "eighth" was omitted by the printer. The sentence should read thus: "I place the cells in the nursery cages on the *eighth* day after they are sealed, and before night many of the queens will emerge."

◆

The Congressional P.O. Committee has instructed a member to report the "Double Fourth-Class Postage Bill" adversely to the House. It is very similar in its provisions to the Bill offered in the Senate by Mr. Wilson, of Iowa. The "stir" made by business men (bee-keepers included) has killed that very unjust and unreasonable measure. Let us be thankful for that; now some one ought to move that it be decreased to one cent for each 2 ounces.

◆

"Bees and Bee-Keeping; Scientific and Practical. A Complete Treatise on the Anatomy, Physiology, Floral Relations and Profitable Management of the Hive-Bee," is the title of the new work on bee-keeping, by Mr. Frank Cheshire, and is published by L. Upcott Gill, 170 Strand, W. C., London. The first volume contains the scientific part, and is now complete. It has 336 pages, is elegantly printed, beautifully illustrated, and handsomely bound. The subject-matter is comprehensive, the information recent, and the style faultless. We can supply this volume at $2.00, postpaid. We will publish a review of this work as soon as space will permit.

Notwithstanding there has been no severe cold weather during March, says the *Indiana Farmer*, the weather has been sufficiently cool to retard all vegetation, and the chances are in favor of the bees being able to reap a rich harvest from the maple and early willow bloom, giving them an exceptionally good start for the season.

So far as we are now able to foresee, the prospects are very encouraging for the bees and their masters. The losses have been light, and bees in the main have come through the winter in fine condition.

Colonies that are a little weak build up very slowly during the cool weather of early spring, the small number of bees being unable to create the required amount of heat except over a very small patch of brood. They may be assisted very materially by decreasing the size of the brood-chamber with division-boards, and by a covering of some warm material. Old pieces of carpet, bagging, or any thing that will retain the heat answers the purpose.

We have tried many substitutes for pollen, but give the preference to rye-meal, as the bees seem to like it better. The meal should be spread in shallow boxes in a sheltered, sunny nook, out of the wind. If the bees do not take to it readily, some scraps of old comb laid in the box will attract their attention. After one or two commence work others are soon attracted by the hum of their busy wings, and in a short time the box will be full of their wallowing dirty bodies, offering one a good opportunity to study the process of gathering and storing pollen. They of course gather only the finer particles of the meal, leaving the hulls as offal, and it is surprising to see what a quantity they can carry away in this manner in a few short hours.

◆

From Norway comes this from an ardent admirer of American apicultural progressiveness. Mr. Ivar S. Young, editor of the Norwegian bee-paper at Christiana, writes thus: "I have received the History of the North American Bee-Keepers' Society, and have read it with great pleasure; but I regret not having been able to be present at the enthusiastic meeting in Detroit, last December. I feel now more than ever the need of seeing, hearing, and living with the most advanced bee-keepers of the world." We should be pleased to have our European cotemporary attend the next meeting at Indianapolis, Ind., next fall.

◆

A Man in Texas has just taken out a patent on a honey extractor consisting of a revolving comb-basket in a "can" or barrel, with a long spindle running up through a wooden cover turned by a string being wound around it, the ends of which is held in the operator's hands, and when one end is being pulled the comb-basket turns one way, and then by pulling the other end of the string, it revolves the other way. Such might have been an invention 50 years ago, but now it is a quarter of a century behind the times. The "inventor" must be a veritable "Rip Van Winkle," who has been sleeping for 20 years and has just awoke. The patent was issued less than two months ago.

The Anti-Adulteration Bill now before Congress, has been read twice, and is likely to pass. The Bill is certainly one of the most necessary for the protection and advancement of public health. They have a stringent law in France, and it is executed with vigor. We ought to have a similar one, for an adulterator of any article of food or medicine should be sent to State's Prison.

Paris has a superb Municipal Laboratory, the offices, analytical chemists' rooms, and other departments of which are on the ground floor of the *Prefecture de Police*, or Central Police Office. To this laboratory anybody who doubts the genuineness of an article of food that he has purchased, may bring it for analysis. It will cost him nothing to have it analyzed. Two inspectors from the laboratory go to the shop-keepers' place of business, and take samples of the kind of goods already analyzed and found to be adulterated. If the analysis of those samples agree with the one previously made, the shop-keeper is rigorously proceeded against at once. He is liable to be heavily fined, imprisoned, deprived of the few civil rights he is supposed to be otherwise entitled to, and has to display conspicuously in his store window or on his door, for a year, a large placard bearing the words, "Convicted of Adulteration."

◆

Another New Work on Bee-Culture.—Dr. C. C. Miller, of Marengo, Ills., has written a new book, entitled, "A Year Among the Bees: being a talk about some of the plans, practices and implements used by a bee-keeper of 25 years' experience, who has for eight years made the production of honey his sole business." It is thus described by the author:

> It is intended, as near as possible, to go over the whole ground of what I do from the one end of the year to the other; just what I should expect a bee-keeper to observe if he made me a visit of a year. There is nothing published that occupies exactly this field, and I often think how much I would have given for such a work 25 years ago.

We are now printing it and it will be ready for delivery in about 3 weeks. It will contain about 128 pages, and will be nicely bound in cloth. Price, 75 cents by mail, postpaid. It is a valuable work, thoroughly practical and progressive, just the thing for beginners, and will obtain a large sale.

◆

New Price-Lists have been received from the following persons:

A. I. Root, Medina, O.—40 pages—53d edition—Bee-Keepers' Supplies, etc.

A. E. Woodward, Grooms' Corners.—4 pages—Italian and Albino Bees and Queens.

James F. Wood, North Prescott, Mass.—6 pages—Queens and Bees.

J. M. Shuck, Des Moines, Iowa.—32 pages—Invertible Hives and Implements for the Apiary. Also Curl's Self-Inking Section Stamp, for marking Sections containing honey.

Jas. M. Hyne, Stewartsville, Ind.—12 pages—Bees, Queens, and Apiarian Supplies.

M. E. Mason, Andover, O.—1 page—Bee-Keepers' Supplies.

Geo. T. Hammond, Brockport, N. Y.—4 pages—Bee-Keepers' Supplies.

Chas. Stewart, Sammonsville, N. Y.—1 page—Comb Foundation.

J. C. Bowman, North Lima, O.—16 pages—Italian Bees and Queens, Bee-Keepers' Supplies and Fowls.

F. D. Welcome, Mechanic Falls, Maine.—4 pages—Bees, Queens, Supplies, and Small Fruit.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Transferring Bees.

Query, No. 231.—I have a number of colonies of bees to transfer to Langstroth hives, and would like to know the best method of doing it, and when it should be done. I desire replies by prominent apiarists.—Va.

I think that I should use the plan which James Heddon employs. It has been given in the BEE JOURNAL.—C. C. MILLER.

The method recommended by James Heddon is good. Transferring can be done at any time, but I prefer to do it when the apple trees are in bloom.—H. D. CUTTING.

Drum out the bees from the old hive, and hive them in the usual way, by shaking them in front of a hive containing combs or foundation on the old stand. The best time to do this is when the honey is coming in moderately at the beginning of the (white clover) honey season.—H. R. BOARDMAN.

Transferring should be done in the spring, and when fruit trees are in bloom is the best time to do it. For detail of a method consult any work on bee-keeping.—J. E. POND, JR.

I transfer bees during apple bloom with the least possible trouble. The combs at that time contain less honey than at any other time, and are tough without being soft or brittle. If the combs are not too old and crooked, it has always paid me to transfer all the worker combs. If any of them turn out to be unsatisfactory they can be removed afterwards at little cost. It will pay dealers in bees and supplies to use foundation in place of the combs, but it does not pay the beginner to go too fast. Any of the text books give the *modus operandi*.—G. W. DEMAREE.

Sowing Melilot and Alsike Clover.

Query, No. 232.—Will it pay to sow melilot clover with Alsike clover in March on fall wheat, letting them stand two years? White clover blooms in this locality from May 20 until July 1. Can I prevent the Alsike from blooming until after this time, by pasturing until the middle of May? Will it then bloom in time for me to secure the seed?—Ind.

Alsike can be kept from blooming in the way mentioned, and a crop of seed secured.—W. Z. HUTCHINSON.

I think it will pay to sow the Alsike; but I should prefer to sow this unmixed. By feeding this off, its time of bloom can be deferred. My brother has tried Alsike with great success.—A. J. COOK.

We do not think it will pay, as the melilot grows too coarse, and will spoil the other for hay. It is far better to sow them separately. Melilot is good for land which has been ruined by bad cultivation. Its roots are very large, and it promptly enriches the soil.—DADANT & SON.

Space Between Brood-Combs.

Query, No. 233.—Where box-hives are used with immovable bars to support the combs, ⅜ of an inch thick, would not ⅜ of an inch space between the combs be as good or better than ½ of an inch, giving less lurking place for the bees in the hive, and sending more bees to the surplus boxes? If not, what are the objections?—F.

Yes, ⅜ of an inch is enough.—H. R. BOARDMAN.

I think your plan might be good if the bees would follow, but I have tried it a little with movable frames, and the bees changed the space as they built down. But surely—surely—do you take a bee-paper, and are you going to make box-hives?—C. C. MILLER.

Yes, undoubtedly. In fact I find it to be the case with frames. I find also that when a bee-space only is left between the frames, brood is deposited close to the top; when, if they were wider apart, the comb would be used for the storage of honey. I prefer thus spacing the frames to reversing, as it can be more easily and cheaply accomplished.—J. E. POND, JR.

I have worked the combs from 1¼ to 1½ inches apart, from center to center of the combs, with success. For stationary combs, 1⅜ is exactly right. If the bars are ⅞ of an inch wide they will be ½ of an inch apart. When constructing hives with fixed combs, you must remember that one advantage may be offset by some disadvantage. Thus, if close combs force the bees into the surplus department, the narrow spaces will spread the bees *too thinly* when in winter quarters.—G. W. DEMAREE.

Swarming and Dividing.

Query, No. 234.—Are bees liable to swarm after they have been divided, if plenty of surplus room is given them? What is the best method of dividing?—Wis.

Yes. There are too many "ifs," "buts" and "ands" to give the best method in this department.—W. Z. HUTCHINSON.

1. They are in this locality. 2. By allowing natural swarming and doing away with after-swarms.—G. M. DOOLITTLE.

Not as a rule. The best plan of dividing is to take 2 or 3 combs of brood with adhering bees from 2 or 3 colonies and unite them, giving them a queen.—H. R. BOARDMAN.

They will often swarm after being divided, though if given plenty of room they are not apt to do so. With reversible hives I think that the swarming can be easily prevented. For increase, unless we permit swarming, I prefer to build up nuclei.—A. J. COOK.

Bees are as liable to swarm if divided after they get the swarming fever, as if they were left alone. If divided before they get the swarming impulse, the dividing may prevent swarming. It would take 3 pages for the methods of dividing.—DADANT & SON.

This is a question that requires more space to answer than this department can afford. I have given my experience regarding it in my book, "Success."—JAMES HEDDON.

Convention Notices.

☞ The bee-keepers of Stark and adjoining counties are earnestly requested to meet at Grange Hall (over Farmer's Bank), Canton, O., on Tuesday, Apr. 13, 1886, for the purpose of effecting a permanent organization. MARK THOMSON, *Sec.*

☞ The Southern Illinois Bee-Keepers' Association will hold its 3d annual convention in Teague & Harris's Hall at Duquoin, Ills., on Thursday, Apr. 8, 1886, at 10 a.m. A general invitation is extended. F. H. KENNEDY, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on April 10, 1886, at 10 a.m. M. E. DARBY, *Sec.*

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.
B. F. CARROLL, *Sec.*

☞ The next annual meeting of the Western N. Y. and Northern Pa. Bee-Keepers' Association will be held at Randolph, N. Y., on May 4, 1886.
A. D. JACOBS, *Sec.*

☞ The Progressive Bee-Keepers' Association will meet in Macomb, Ills., on Friday, Apr. 9, 1886, afternoon and evening. Essays will be read and an address will be given by Rev. E. L. Briggs, of Wilton Junction, Iowa. Other speakers of note will be present. It is desired that all interested in bee-keeping should be present.
J. G. NORTON, *Sec.*

☞ The DesMoines Co. Bee-Keepers' Association will meet at the Court House in Burlington, Iowa, on Tuesday, Apr. 27, 1886, at 10 a.m. Any articles sent to the President, Mr. Geo. Bischoff, at Burlington, for exhibition, will be well cared for and returned or sold, as the sender may direct. A cordial invitation is extended to all interested in bee-keeping. JOHN NAU, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall, N. W Corner of Main and 11th Sts., (entrance on 11th St.), at Kansas City, Mo., on Apr. 29 and 30, 1886. The Cable Line can be taken from the Union Depot for 9th and Main Sts. The following essays will be read: "The Honey Market," by Clemons, Cloon & Co.; "Bee-Keeping in Iowa," by E. Kretchmer; "Best method of handling bees for comb honey," by A. A. Baldwin; "Missouri Bee Keeping," by J. D. Pearce; "Does bee-keeping pay as a pursuit?" by Jos. Nysewander; and "Invertible Frames and Hives," by J. M. Shuck.
P. BALDWIN, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ⟜ east; ⊸ west; and this ♂ northeast; ⦸ northwest; ⟟ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

Replies to Inquiries about my Hive.

JAMES HEDDON.

I deplore the necessity of writing so long an article upon this subject. I will endeavor to answer the questions of Messrs. Alves, Kretchmer, and Pond, most of which relate to our United States patent laws and rulings. For the past 20 years some of my study outside of apiculture has been that of patent law; being led in this direction by association with a near friend, who is one of the leading solicitors and counselors in this country. Before penning my replies, allow me to quote the following from the Supreme Court decisions, and other high authority, numbering the quotations in sections, references to which will save time and space; for I am sorry to say that brevity and justice to the subject are not possible partners when discussing this question, and answering many inquirers in one article.

In view of the fact that bee-keepers have received some false impressions regarding the object and worth of our patent system, and that almost all believe the erroneous doctrine that the breadth and validity of a patent may be determined by subjecting its claims to a few sharply-defined, dogmatic statutes. I offer the following quotations:

SECTION I.—The right of property which an inventor has in his invention is excelled in point of dignity by no other property-right whatever. The benefits which he confers are greater than those which he receives. He receives from the Government nothing which costs the Government or the people a dollar or a sacrifice. He receives nothing but a contract which provides that for a limited time he may exclusively enjoy his own. Letters-patent are not hurtful monopolies.

II.—Old desires newly attained are evidence of invention.

III.—Combining old devices into a new article constitutes invention, when such combination produces a new mode of operation.

IV.—According to a principle in patent law—one prominent in determining patentability—the public adoption or desire to adopt a new device affords evidence of novelty and patentability.

V.—Patent law declares that the fact of abandonment and subsequent adoption of things claimed to be alike, is evidence sufficient to negative that claim.

VI.—Novelty of a thing is not negatived by any other thing fundamentally incapable of the functions of the first.

VII.—Novelty and patentability are not negatived by the fact that every part of the thing is old.

(By virtue of a new combination of the old 26 letters, this issue of the AMERICAN BEE JOURNAL is new.)

VIII.—Novelty of any thing is not negatived by another thing which was not designed or used to perform the functions of the first. Everything favors the patentee on account of perjury.

IX.—Infringement or desire to infringe, are either or both, *prima facie* evidence of utility.

X.—Addition to a patented machine or manufacture does not enable him who makes, uses or sells the patented thing with the addition, to avoid a charge of infringement. The above is true, even when the addition is a great improvement, and patentable or patented.

XI.—Changing the relative position of the parts of a machine or manufacture does not avert infringement where the parts transposed perform substantially the same respective functions after the change as before.

XII.—Any claim will hold its equivalent, for few combinations now exist, or can hereafter be made, which do not contain at least one element, an efficient substitute for which could readily be suggested by any person skilled in the particular art.

XIII.—The state of the art to which an invention belongs at the time that invention was made, must be considered in construing any claim for that invention.

XIX.—The original inventor of a machine will have a right to treat as infringers all who make, use or sell a machine operating on the same principles or performing the same functions by analogous means or equivalent combinations.

XX.—A patent should be construed in a liberal spirit to sustain the just claims of the inventor. Novelty and utility constitute patentability. Whether mentioned therein or not, all claims hold all equivalents and all constructions, the arrangements and functions of which are substantially like the thing claimed.

By the foregoing it will readily be seen that our patent statutes and rulings are very elastic; made so for the purpose of doing justice in all the varied cases; and further, that a patent covers much more ground than usual where it relates to a manufacture which is adapted to and invented for carrying out a new mode of operation or system of management.

Space forbids the mention of the many decisions in actions in equity, which go so far toward doing justice to those who give the public something of value.

In reply to Mr. Alves' questions on page 72, I will say that the only trouble I have had in any of the ways he mentions, has been to get all the parts of the hive of accurate measurement, and thoroughly-seasoned material. After that, everything stays in place, and I have less trouble with bee-glue than when using the suspended frame. So say all who have used the new hive. I desire to thank Mr. Alves for his candid and intelligent article on page 167.

Regarding Mr. Kretchmer's patent: By adopting the following method in replying to him, I do so to save space, and because the case at point is so clear. I have a copy of his patent, No. 67,123, cited by him on page 211 of *Gleanings*, and page 185 of the BEE JOURNAL. I have studied his specifications, of which the drawings form a part, and carefully read the four declarations which he says constitute the nature of the invention. None of them anticipate or conceive of one single principle connected with the construction, manipulation, or new functions of my hive. The brood-chamber is not in two parts, it has a fast bottom, is utterly incapable of being inverted, "alternated" or interchanged, and not a word pointing to the conception of such a thought is anywhere found in the specification. The upper surplus apartment has tight-fitting top-bars. The wedge of which Mr. Kretchmer speaks, is not the equivalent of a screw, is not used substantially in the manner nor for any of the purposes for which I employ the use of the screw, except as it presses the frames together, tending to lessen the deposit of bee-glue between them, which has been used for years in wide-frame supers, and for which no one has ever claimed a patent.

The break-joint principle of my honey-board is shown very differently arranged, not substantially as I use it, nor for any of the purposes except that he mentions its having a tendency to prevent the queen from going above, while I use it mainly for the purpose of preventing the attaching of brace-combs to the bottom of the surplus receptacles; for which a patent was granted to me when used in combination with the new hive.

Now, Mr. Editor, in order to save time and space I mail you a copy of Mr. K's patent as cited, also of my own, and request you to hand them both to the foreman of your manufactory, or any patent lawyer, or any one else competent (if for any reason you would rather do so, than examine it yourself), and in a foot-note to this article, give the results of that examination in fewer words and less space than would be required to copy our several specifications and claims, and state whether or not my declarations as above are correct, and if you can find one single feature or principle anticipating the construction or purposes of my late invention.*

In point of connection let me refer the reader to many of the sections above quoted.

Referring to Mr. Pond's article on page 199, the sections I quote above, as well as Dr. Tinker's candid article, seem to me to fully answer Mr. Pond's questions. Mr. P. sees little difference between my arrangement and Mr. Root's Simplicity hive, except in depth, which the latter constitutes no invention. I certainly can and should have no objection to the continuance of a public use of Mr. Root's Simplicity hive in any depth, or the use of anything else that has been in use, or anything that may come into use that does not use substantially any of my combinations as and for the purposes specified. I should not, could not, and do not claim anything based upon depth, size, number, or thickness of parts.

Although the idea of inverting combs by series rather than singly, originated with me (whether prior to originating with others I cannot say). I make no claim to the principle, except when operated by the mechanical construction described in the specifications of my patent.

Mr. Shuck's patent, though filed before mine, was issued later than mine, and like it, is perfectly valid; it in no way interferes with mine — neither one being cited to the other during the pending of our applications. Mr. Shuck is working in one way and I in another for the accomplishment of ends which our experience has taught us are valuable. Wedges are not equivalent to screws, and practically incapable of performing the functions of the latter when used for the purposes for which I use them, as specified in my patent.

I am astonished that Mr. Pond should interpret patent principles as he does. In reply to his question as to what is *new* in my hive, and what I claim as my invention, I will enumerate them:

1. The set-screws in combination with closed-end brood-frames, or wide frames for the purpose of securing them tightly in the case, for the purposes of supporting the frames when inverted.

2. Arranging frames within a case (which is bee-space deeper than the frames) in such manner as to leave one-half of that bee-space on either side of the frames, or arranging them so they can be quickly adjusted to one side or the other, thus reversing the bee-space at will.

3. The combination of my honey-board containing a bee-space in one of its surfaces, or divided between each surface containing slats arranged to cover the spaces between the brood-combs below, with the cases as above described.

4. A cover with one or both surfaces containing a bee-space, or partial bee-space, when used in combination with the cases above described.

5. The combination of the cases, as described with the bottom-board and bottom-stand, as described in the specifications.

6. In a bee-hive a brood-chamber composed of two or more horizontally, separable and interchangeable sections, *when* said sections are made invertible.

The above constitutes most of that part of my invention which I believe is not anticipated by anything inside of the Patent Office, nor outside of it, so far as the state of the art is now known. All of which is shown in my specifications, much covered by the claims, and the rest open to re-issue. I could have claimed and held all double brood-chambers, no matter how they are constructed, had it not been for the existence of older constructions in impractical form, and which died of that derangement. This limited me to what I believe to be the best construction of it. However, I claim an honorary right to all double brood-chambers when used for the purposes specified in my patent. The matter stands like this: Arnold owns a horse. His horse dies. (A dead horse is burial-expenses worse than worthless.) Thompson has the power to bring that horse to life; and with much effort he succeeds in doing so. Now, who owns that horse? Morally, Thompson; legally, Arnold, and he will likely keep him, if he is a descendant of "Benedict."

As this article is already too long, I will close by referring Mr. Pond to Sections 2 to 8 inclusive, and add that it seems to me that all that has been said, and is being said, regarding this invention, amounts to the best of evidence in favor of its novelty and utility, and I cannot yet believe that many bee-keepers wish to avail themselves of the results of my labor, either as an inventor, promulgator or advertiser; and I do believe that any who may attempt it, will by so doing lose more than they will gain, such is the dispostion of most bee-keepers to do justice and give "honor to whom honor is due."

Dowagiac, ♀ Mich.

[*As we prefer not to be "mixed up" with this hive controversy, we handed the two patents to our foreman for critical examination. He gives his opinion thus: "After carefully reading the specifications of both hives, and the proof of the above article, I fully coincide with the opinion of Mr. Heddon, and do not find one single principle in the Kretchmer specifications anticipating the construction or purposes of the Heddon hive."—Ed.]

* * *

For the American Bee Journal.

Marshall Co., Iowa, Convention.

The Marshall County Bee-Keepers' Association met at the Court House in Marshalltown, Iowa, on Feb. 20, 1886, with the President, Mr. O. B. Barrows, in the chair. The minutes of the previous meeting were read and approved. There being but few present, it was thought best to defer the regular programme until the afternoon session. The convention then adjourned to meet at 1 p.m.

At the afternoon session the President made quite a display of tools from his apiary, that are of convenience to the practical bee-keeper. The exhibition seemed to interest all present. The regular programme was then taken up.

By request the Secretary read Mr. L. Koeper's essay as follows, on

HONEY-PLANTS OF IOWA.

The soft maple is the first bloom in the spring, but it is often lost on account of the cold weather. The dandelion is the next to bloom, but it is not of much importance, as the honey is dark and of a bitter taste, and makes the bees very irritable. The raspberry is a good honey-producer, and yields a very good honey that is excellent for the queen in the laying season.

During the past three years the most important honey-plant has been the white clover. It is abundant, and produces a clear, white honey. Sumac yields a dark honey, and very poor bee-bread. The willow yields some honey, and the best bee-bread of all the different honey-plants, yet it would have been better had we never known the white willow, on account of the plant-louse, which is sure destruction to the bees.

The basswood affords a fine aromatic honey which is a medicine for man and bees, especially the queen-bee, when she is exhausted from laying so many eggs daily. Second-crop red clover produces good, thick, brown honey. Alsike clover is a good honey-plant, and lasts through the early part of the summer; but being a biennial plant, it lasts only for two seasons. Goldenrod is the richest honey-flower here, and if there are plenty of flowers, the bees will store 5 pounds of honey from this in the same time that they would gather 3 pounds from white clover. The only one of importance remaining is the buckwheat, which yields a thick, brown honey.

Gooseberries, plums, fruit-blossoms, elms, hard-maple, box-elder, corn, cucumber, melon, squash, cane and many other plants produce honey, but not in paying quantities.

The essay was of interest to all present, and called out a number of questions which were satisfactorily answered by Mr. Koeper. One was, "Why is the willow injurious to to bees?" Mr. Koeper replied that the willow was the natural home of a plant-louse or aphis; and this aphis was a great producer of the so-called honey-dew, as well as are many other aphis or minute insects of other trees and plants that produce the honey-dew by exudation. This substance is often gathered by bees. It is of very poor quality, and poisonous to the bees when stored in their hives. It is no uncommon thing for whole colonies to be killed by it. In Germany he had seen 16 different kinds of aphides examined by a powerful microscope, and all showed this so-called honey-dew, some of the smaller ones producing the most. He said this was the only way that honey-dew was produced.

The Secretary stated that, from reports, in many parts of the country during the season of 1884, whole apiaries were badly injured, or entirely destroyed by this honey-dew. He said if there was such a thing as honey-dew, as many believe there is, it would be on all kinds of vegetation alike, just the same as the common dew.

G. W. Keeler, on the subject of extracted honey, said that he was not prepared with an essay, but would tell how he worked his own apiary. He used a two-story hive, the lower story being 11 inches deep, and the upper 7 inches. He extracts entirely from the upper story, unless there is a crowding of the brood-chamber, in which case he extracts the extra honey and puts empty combs in the centre of the brood-chamber. He extracts the honey when the combs are partially sealed; puts the honey into barrels, and covers them with a cloth so as to allow the honey to cure well, keeping it in a warm, dry place.

Mr. L. Koeper extracts as soon as the combs are full, and before it is capped. This saves the trouble of uncapping, and he thinks he can get much more honey than to wait for it to be capped. He lets it ripen in open vessels. He uses a one-story hive with a large brood-chamber with 15 frames; takes the honey from 4 to 6 of the outside frames at first, and on every second day, getting from 4 to 11 pounds per colony in two days. He likes taking it before it is capped, for by that means he gets each kind of honey separate. His idea is that the honey ripens by evaporation, and is just as good as when allowed to ripen in the combs.

Mr. G. W. Calhoun preferred to extract the honey after it is capped.

The Secretary stated that he likes to have the upper story the same size as the brood-chamber, so as to exchange frames if necessary, on account of its being so convenient to have the frames all of one size. He often found it necessary to extract from the brood-chamber of a 10-frame Langstroth hive, so as to allow ample room for the laying of the queen.

The subject, "Spring Management," was then taken up as follows:

Mr. Cover puts his bees out as soon as the weather will permit in the spring. He puts out a little honey to attract them to their pollen feed. He uses rye, corn and oats well ground, and feeds some honey where they need it. He keeps them supplied with this pollen feed until they begin to gather from the timber. One spring his bees gathered natural pollen for 3 days in February, and all thought that this was an unusual thing for bleak (?) Iowa.

Mr. Koeper prepares his bees well before the time to put the hives on the summer stands. Then on some warm day, but not too early, he lets them have a good flight, and on the next day, if it is pleasant, he goes over them and cleans all up, giving each one its necessary attention. He aims to get all colonies strong by the time the white clover comes. He places empty frames in the centre of the brood-chamber as fast as they are needed, and uses artificial pollen to stimulate breeding.

Mr. Keeler, Mr. Calhoun and others said that they used about the same methods as had been given. The Secretary called the attention to the use of a division-board with rubber on the ends, so as to make it fit close and be easily moved in contracting the size of the hive to suit the colony.

Nearly all present reported that they put their bees into winter quarters about Dec. 1, and the report of all was that their bees at this time were all right, or appeared to be in fine condition.

The whereabouts of Mr. F. H. Hunt were inquired for, and whether the honey that was sent to the State Chemist had been heard from. The Secretary replied that Mr. Hunt left the State, and that Mr. Tamblin, of Lincoln, Neb., the one who had the honey forwarded to our State Chemist at Iowa City, had died early last spring. The Secretary had received no report from the chemist. A number present were of the opinion that all was not right with the man who was once an Iowa bee-keeper. This Association denounces all fraud or the appearance of it.

The subject for discussion at the next meeting, is "The summer care of bees." "How to control swarming" will be treated of by Mr. L. Koeper. The annual election of officers will occur at the next meeting. The convention then adjourned to meet at the same place on Saturday, April 17, 1886, at 10:30 a.m. Bee-keepers of other counties are invited to attend. J. W. SANDERS, *Sec.*

For the American Bee Journal.

The Quiescence of Bees in Winter.

17—G. M. DOOLITTLE, (40–95).

About the time I gave my report of my winter loss of bees in my bee-cellar, during the winter in which I kept the temperature of the cellar at 50° or more by the use of an oil-stove, I told how I always found the bees active every time I went into the bee-cellar, and how, upon raising a quilt over any colony, the bees were always ready to come out to meet me and buzz against the lamp. From this I prophesied that I should lose those bees, for heretofore, during winters in which the temperature of the cellar had been from 40° to 45°, I had always found the bees inactive, and in a very quiet state.

A short time after this, Rev. W. F. Clarke wrote me that he "was sorry for my loss of bees in my bee-cellar, but that my experiments had been the means of his making a great discovery, which I would soon see in print." He also added, if I mistake not (I quote all from memory as I have not the time now to hunt up the letter), that if I "did not fully accord with his views he hoped I would not be hasty in harshly criticising them;" to which I replied that I would take time before I said aught of his "great discovery," whatever it might be. It soon appeared that the "great discovery" was his "hibernation of bees," and as several years have elapsed since he made that discovery, I feel that I have kept my agreement with him, and am at liberty now to say a few words on the subject.

During all this time I had been trying to find out just what Mr. Clarke meant by his word "hibernation," but I could not fully do so until I read Dr. Tinker's article on page 5. To this, Mr. Clarke cried "Eureka!" "Henceforth 'HIBERNATION' is the word," expressing the quiescent state in which Dr. T. found his bees. When Mr. McNeil wrote in the BEE JOURNAL, a year or so ago, that Mr. Clarke had made no new discovery regarding the hibernation of bees, Mr. C. replied: "What I did was this: I called attention to a fact or principle in bee-life, not unknown, but practically overlooked in our theories of wintering....In this condition (hibernation) their consumption of honey is very trifling, and if we can find out how to get them into it, we shall secure their wintering at the smallest possible cost." When I read this I said to myself, "I believe Mr. Clarke is mistaken in thinking that the above conditions had been 'practically overlooked' until he 'called attention' to them;" but I was not positive of it until he accepted Dr. Tinker's definition of the "hibernation of bees." As soon as he did this. I turned to page 145, Vol. III of the AMERICAN BEE JOURNAL, where I found these words written by my old teacher in bee-culture, E. Gallup, who, by the way, ought to receive greater credit for his practical articles of 15 years ago than we are giving him. The words are these:

"Walk down into my cellar and see the bees, it will take but a few minutes. Step up and look at them by the light of the lamp. Do you see the striped fellows in this hive? 'Yes, but Gallup, they are dead as a door nail.' Not a bit of it. 'Well, they don't stir.' Let us breath on them a trifle. 'They are alive; that is a fact. Do they keep as quiet as that all winter?' Certainly. And that is not all; they scarcely consume any honey all winter." The title of the article from which I have quoted is "Prevention of Bee-Diarrhea," and I request that it be republished entire, so that Mr. Clarke, Dr. Tinker, and *all* may read how to winter their bees in safety, for I know from an experience of 17 years that the vital principles regarding the safe wintering of bees are found in that article.*

The reason why I knew that my bees were going to die that winter, was because they were not in the quiescent state which Mr. Gallup describes as a requisite to safe wintering—the state mine had always been in when I had been successful in cellar wintering. I have just seen my bees that are in the cellar, and I find that all those which are properly ventilated are entirely motionless, except as they are disturbed by being breathed upon or otherwise, while a few that I tried to keep warmer by confining the heat in the hive, are not clustered as compactly, and are easily disturbed by the rays of the lamp. The temperature of my cellar is 43°, while in another of Mr. Gallup's articles, he says that his was 40°.

I should like to tell the readers all about how the different colonies of bees act in my cellar; how they compare with their actions of other winters; how I have watched them for hours to see the change in the cluster, of which Prof. Cook speaks, etc.; but it would make this article too long were I to do so. But I must say that, with Prof. Cook, I object to "this winter quiet of bees" being termed "hibernation." Any thing that can be aroused to activity by a simple breath of air cannot be said to hibernate, according to my understanding of the word. Prof. Cook illustrates hibernation on page 87, by means of the wasp. I wish to illustrate it a little more by telling a story of a *colony* instead of an individual, as some might say that there would be a difference. It is as follows:

During the fall of 1875 I built a new house on my present location, 40 rods from any other building. In 1876 I built my shop and put in a steam engine. Where I had formerly lived I was bothered with black ants which I supposed were the same as those which throw up mounds of earth in meadows and elsewhere in this locality; so I expected to soon have them about in my new location, as I noticed these earth-mounds all about. Much to my delight no ants appeared until the summer of 1878. During the winter of 1877-78 I cut an aged maple tree in the woods and drew it in "drags" down by the shop to use for fuel for my engine. In cutting up the dead and somewhat dozy top of the tree, I came across a colony of ants. These ants appeared as dead as any dead insect I ever saw. I looked them over, picked out several queens, and, when my curiosity was satisfied, threw all on the snow where I saw them every day for about a week, when a snow covered them up.

As spring thawed the snow away my ants laid on the ground in a pile near the sill of the shop, when I again poked them over and examined the "dead things." In a few days the sun came out hot, and that evening, in passing the shop, I noticed that my pile of ants was gone, and soon found, much to my sorrow, that they had taken up their abode in the sill of the shop and elsewhere, wherever they could gnaw into the wood, where they still exist to torment me every summer. These ants were HIBERNATING, gave off no warmth, lay motionless all winter, did not stir when their home was split open, and no amount of disturbance could arouse them. If Mr. Clarke or Dr. Tinker can get a colony of bees to pass the winter in like state, then we will all willingly call it "hibernation," and besides, shower them with honors for making a "great discovery." Till then, frends, please use the word "quiescence" instead of "hibernation."

Since writing the above I chanced to split another colony of ants out of a decayed log. These appeared as dead as those spoken of which I found several years ago. I took two in my hand and breathed upon them three times, as long as I would to revive chilled bees, but there was no signs of life. I then took 10 of them and put them into a bottle, placing the bottle near the steam-engine where a temperature of 85° was maintained. At the end of 3 hours no life was shown, but in 5 hours from the time they were left there all were as lively as crickets. This was hibernation, not quiescence.

Borodino,⊙ N. Y.

[*As soon as space will permit, we will republish the article.—ED.]

For the American Bee Journal.

Telling the Bees.

W. F. CLARKE.

I supposed that the superstitious custom of "telling the bees" belonged to a by-gone age, until the other day, when I made the unexpected discovery that there are some remains of it, even in this era of light and knowledge.

Calling on an aged English lady, an old maid—it is no libel to call her such, for she is in her ninety-third year—the conversation came somehow to turn on bees. "I used to keep them," said the old spinster, "and I'll tell you how I lost them. When my father died, I went to the hives and rapped on each one, saying "death, *death*, DEATH!" When my mother died, I was so troubled and worried that I forgot to tell the bees, and every one of them died."

"I do believe its all a blatther o' smoke," said her brother, an old boy of about seventy. "I tell thee, Henry, its nuthin' o' the kind. Its true as Bible. Why, there's William D." (resident about two miles away), "who used to keep bees; he got married, and did n't tell the bees. Well, his wife got cancer and died, and every one of the bees died, too."

It was of no use arguing with a lady of her age and experience, for

"If she will, she will, you may depend on't;
And if she wont, she wont, and there's an end on't."

So I left her to hug her pet superstition during the rest of her waning eve of life.

Guelph, Ont.

For the American Bee Journal.

Causes of Loss in Winter.

JAS. A. MINICH, M. D.

We can scarcely pick up a bee-paper that has not something to say on this subject. We hear it discussed *ad infinitum* at our conventions; and of remedies to guard against winter loss, there is no end. It is amusing to see how widely apiarists differ and the variance of their opinions. I have listened patiently, and have faithfully read all the theories. I do not object to any and all the plans that have been given from time to time; they are all good enough as far as they go. It is well to put chaff-cushions, forest leaves, or any good absorbent in the upper story of the hive; or to pack straw or sawdust, or chaff around the outsides of the hive; contract the brood chamber to five or six frames; make passage-ways through the combs, or place sticks on top for the same purpose; and put them into a suitable cellar. All these cautionary measures are proper, and most of them necessary to success. The bees will generally winter well and come out in the spring all right, and every bee-keeper feels as though he had solved the winter problem, and is on the road to success, and even to fame, and he cries "Eureka!"

But sooner or later an epidemic comes and the bees die in spite of all the above plans and remedies, and a "change comes o'er the spirit of his dreams." And again the discussion begins—"too much pollen," too much ventilation, or not enough; too much heat or too much cold, or too damp; and more remedies are offered. Now, why is it that these epidemics will come every few years? In my opinion the main reason has been overlooked. I have observed that every epidemic among bees has been preceded by a *drouth* the summer or fall previous. I wish every apiarist to make a note of this. This was the case the summer and fall of 1880, and it was followed in the winter by great fatality among the bees. It was the case 13 or 14 years ago—I cannot tell the year—and the bees were almost annihilated the following winter in Central Indiana. And in the summer and fall of 1884 there was sufficient drouth at the proper time to bring about the same result.

But how could it affect the bees? you ask. In two ways: 1. It is a well known fact that flowers will not bloom and honey will not flow in dry weather, and consequently the queens cease to lay eggs, and breeding stops. Now one can readily see that colonies will have to go into winter quarters with old June and July bees which were ready to die from old age and exhaustion; or perchance a few of them might linger a few weeks longer, and "one by one they pass away" in the spring—"spring dwindling" caused by old age.

2. *Dry weather* is conducive to the secretion of honey-dew or "bug-juice," and bees will gather it and store it away for the winter, which causes *diarrhea* among the bees and consequent death.

The remedy: Taking the above to be facts, the remedy is now plain enough; the winter problem is solved. When dry weather sets in, and the honey-flow ceases in August and September, the bees should be fed regularly so as to stimulate late breeding. This should be done *regularly*, or the queens will not have much confidence in the future outlook, and will stop laying. Honey-dew should be excluded in every way possible. It can be detected as soon as the bee-keeper sees it. Take it out and feed them bountifully on cane-sugar syrup.

Now, fellow bee-keeper, if you will be as careful in this respect as you are in others, you will have no losses. Remember that your greatest trouble is caused by drouths; and that if your colonies can go into winter quarters with young bees; with pure honey or syrup; cushions of chaff or leaves on top; passages for the bees to travel from comb to comb; and keeping them quiet, and not bothering them at all in their long rest, you will see them all come out booming in the spring. No matter how severe the winter may be, they will survive and come out all right, on the above conditions.

Indianapolis,⊙ Ind.

For the American Bee Journal.

A Sample of "Cheap" Honey.

W. J. CULLINAN.

I have frequently noticed honey quoted at 6 to 8 cents per pound in the markets, and as often wondered how *pure honey* could be produced and sold at a price that would justify the dealer in offering the same at these (as I supposed) ruinous prices. My wonderment was still further augmented when I learned, the other day, that a dealer in groceries at this place was selling California (?) honey, which he purchased in New York, at 11 cents a pound. I did not go to see the stuff, which I learned resembled a poor grade of white sugar wet with water, and forming a tasteless compound bearing no resemblance to honey. And yet the dealer was ignorant enough to say "they (meaning his customers) might know it was white-clover honey, as they could taste the *comb* in it."

Again, I noticed honey quoted in the BEE JOURNAL at 4½ to 5 cents per pound, and I then concluded to ponder no longer in the dark, but immediately sent for a sample of the "four-and-half-to-five-cent honey," and to-day I received by express a package in which were two little bottles containing what I supposed to be honey, but which I found upon examination to be an admixture of coarse, dark, brown sugar, glucose, *ad infinitum*, wet up to a stage resembling in an exceedingly remote degree, partially granulated honey.

It is needless to add that my wonderings at the possibility of selling "honey" at such rates were now at an end, but still I wondered; my wonderings now, however, were of a different order, viz: I wondered now how it was possible for them to get customers even at this low (?) price!

It seems to me it is a bold affrontery upon a trusting public, for men (if *men* they should be called) to make and sell such stuff as an article of diet; but is it not a vile, yea, villainous imposition upon the bee-keeping fraternity for the manufacturers of those repulsive compounds to herald them to the world as *honey*, bringing disrepute upon that God-given nectar, gathered from the cells of flowers—Nature's own repository—by the "little busy bee," and stored in clean, white comb to be converted to the use, health, and happiness of mankind; thereby damaging the interests of the thousand-and-one honest men engaged in the noble pursuit of bee-keeping?

The manufacturers of oleomargarine are no longer allowed to call this vile mixture of tallow, lard, etc., by the name of "butter;" and why should that other class of impostors be permitted to heap odium upon the heads of bee-keepers by styling their noxious and repulsive compounds as "honey?"

Surely our Legislatures, if not our General Government, should be importuned to protect and sustain us in this one of the noblest pursuits of man.

Mt. Sterling,+o Ills.

For the American Bee Journal.

The Sectional Brood-Chamber Hive.

13—J. V. CALDWELL. (125-165).

This new hive seems to be undergoing a fiery ordeal, and in view of the claims put forth by its friends and champions, it is but right that such should be the case. Any hive or other implement used in the apiary, and for which it is claimed will effect a complete "revolution" in our business, must be carefully and fairly criticized. I think that no candid and fair-minded apiarist will deny this. I believe that Mr. Heddon is working for the good of the cause, and in proof of this witness his careful and often losing experiments in wintering; and taking these things into consideration, the claims he puts forth regarding this hive must have a fair and unprejudiced hearing.

We who have read carefully Mr. Heddon's articles during the past year, know that he has been trying to handle his apiaries with as little labor as possible, knowing as he does that honey so produced must be cheap, when compared with honey produced by much high-priced labor. And as our product is yearly becoming cheaper in the markets, it is an idea of no little importance—at least to us who are making a specialty of the business.

I like the idea of a shallow frame, and, in fact, for the past ten years I have used and like much the best a frame but 7¼ inches deep, inside measure. I have also a good many bees on Langstroth frames, but they are too deep for me.

But concerning this new hive, as Dr. Miller says, there are some things I do not understand. We, who winter our bees in cellars, want to know if we must carry all the double lower story into the cellar; if not, will one of the divisions hold enough honey to safely carry the bees through the winter, or at least until it is time to place them on the summer stands? Again, will not the bees be clustered in both parts so we must pull them apart in cold weather when putting them into winter quarters? We who are asked to throw away our old hives and adopt this new candidate for public favor, would simply like to know how much more comb honey can be taken on an average than from our old hives, other things being equal; for, in the end, honey and not bees is what we are after. Doubtless Mr. Heddon can enlighten us on these things, as we must know all we possibly can about it before we spend our hard-earned dollars for any new bee-hive. But on the other hand, if it will be a benefit to us, of course we want it.

Cambridge,+o Ills.

For the American Bee Journal.

Honey-Interests of Florida, etc.

W. S. HART.

"The mangroves have been entirely destroyed by the recent cold wave," so wrote Mr. Jno. Y. Detwiler, on page 60; and on page 102, about the greatly damaged honey-interests of the Florida coast. I do not wish to enter any prolonged controversy over the effects of the cold in this State, but as I believe Mr. D. is inclined to look upon and present to others the dark side of this matter, I would ask permission to "state plain facts," also "let it injure"—no, let it benefit "whom it may." I do this even at the risk of being classed among the "property-owners who have lands for sale." But to escape the consequences of this grave charge as far as possible, I will say that it is on record that I often recommend good people to go to other parts of the State where I have no property, and in what I write herein I will give references and figures that can be traced up and proven false if they are so.

First, he states that "the mercury is reported by various parties as being as low as 10° to 20° above zero." True, such were the reports, and at the date of his first writing it could not be satisfactorily proven false, but as the 10° report was from only one person, and he living on the peninsula near Mr. Detwiler, who reports "on the peninsula the mercury was 20° above zero," I feel sure there was a mistake of some 10° in the lowest report. As further evidence I will state that the lowest point indicated by my thermometer was 23° above zero, at 3 a.m., on the morning of Jan. 10. The lowest reported here at Hawk's Park, from the thermometers in the most exposed positions, was 20° above. At New Smyrna, two miles north, with the exception of the 10° report, the lowest showing was from a thermometer hung in the most bleak place to be found on board of a steamer moored to one of the wharfs. It registered 18° above. At Jacksonville, 100 miles north of here, the Signal Office report at 6 a.m. on Jan. 12 (the coldest day there), was 15° and 3 minutes, which was the coldest registered since 1835. On the place where the 10° report came from, I am told that the little nursery trees retained their leaves, and look as thrifty as ever. Evidently there was some mistake.

2. Notwithstanding the "personal examination," I believe that much of the mangrove here is still alive, and if the blossom buds of the surviving trees are not blighted, we may get a small crop of mangrove honey even this year. A "personal examination" by Messrs. O. O. Poppleton, A. S. Brown, H. W. Mitchell, myself and others, shows quite a per cent. of the black mangrove trees still alive, some of them not having even a twig hurt. It is true that the tree is a slow grower, but as all the bees kept here could take but a small part of the honey heretofore produced by the mangrove, I think there will very soon be enough for them again. In the lower part of the State the mangrove, and even tomatoes, pine-apples, cocoanuts, etc., have escaped unhurt. Some bees and fixtures are offered for sale, for in this as in every other industry, there are some weak-kneed parties that are ready to wilt as soon as the starch of success is withheld for a time.

3. As to the interior's having "suffered much more than admitted," it seems to me that people from all parts of the State have been unusually candid in their statements of the losses, and as each locality has its peculiar advantages, and the building up of any part of the State is a benefit to it as a whole, it is a narrow, near-sighted policy that tries to build up one section or industry by defaming another.

4. "Take away the honey and orange interests of Florida, and there

is but little left for humanity to subsist upon except the food-resources of the coast and the genial climate, which, in many instances, prolongs life when disease has taken a firm hold upon the system." Well, the last part of this quotation is undoubtedly true. and I will vouch for it, but the first half will truly be a surprise to most of the good people of this State who claim to know something of her resources. Let us compare some of our other industries with the two mentioned, and see where they stand in relative production and gross income: Manager Ives, of the Florida Fruit Exchange (than whom no one is better able to judge), estimates the crop of Florida oranges for 1885-86 at 1,000.000 boxes; this at $2.50 per crate ready packed, which is surely a liberal average, would give the State $2,500,000 for the year's crop. In 1884, probably the honey crop of the State was heavier than ever before, or than it was the past season. The State statistics show a production of 210,357 pounds for that year, about one-half of which was produced in this immediate neighborhood. As most of our honey is extracted, I consider 10 cents per pound a fair price at which to estimate the crop; that being some higher than extracted honey sold for that year, and considerably lower than the price of comb honey. Stating it thus, 210,357 pounds at 10 cents per pound, amounts to $21,035.70, making our best showing in the way of a honey crop.

By referring again to statistics of Florida's production in 1884, we find that there was produced of corn, 3,857,200 bushels (worth from 60 to 70 cents per bushel in Jacksonville); potatoes, 70,848 bushels; oats, 494,000 bushels; cotton, 60,000 bales; molasses, 1,290,860 gallons; tobacco, 224,239 pounds; lumber, $3,060,291 worth. We have shipped to Cuba during the last ten years 167,736 head of cattle, bringing $2,469,747 to the State, besides what has been used at home and shipped elsewhere. In 1881 eight counties in this State owned 205,714 neat and stock cattle.

Of the 60,000 bales of cotton 24,987 bales were "sea-island;" over one-third more than was produced in all other sea-island localities put together, and worth more than double the price per pound of "short staple." Our sea-island cotton is of such superior quality that the Coat's Thread Company moved down to the cotton fields so as to be sure of a good supply of it. The cotton crop of 1884 brought $3,000,000, notwithstanding the low prices then ruling. Five hundred thousand crates and barrels of garden truck and 300 car loads of mellons were shipped the same year, and from West Florida alone a business of $633,388 was done by her fisheries. Jacksonville hotels entertained 60,011 guests, to say nothing of her scores of boading-houses, and the increase for this season is some 20 per cent. over that of last season, up to this date.

Our timber interests are immense, and count away up among the millions, pine being found in the greatest quantity, but cypress, live-oak and cedar also being of great importance. Live-oak enough to amount to more than all the honey ever shipped by Florida, all taken together, has been taken from this (Volusia) county in one winter, for Government shipbuilding. Yes, this has been done several seasons. The cedar for the pencils of the world came from this State. The Faber Pencil Company moved their manufactories into the cedar woods of West Florida to secure their supply of it. Our naval stores, sugar, cigar, sponge, fibre, rice, lemon, pine-apple, cocoanut, grape, strawberry, poultry, and many other industries are of as much importance, and some of them vastly more, than that of bee culture. Verily, Florida need not hang her head in shame for lack of inducements for immigration, even were the orange and honey interests taken from her. Give us energetic men to develop our resources and we will surprise our sister States.

5. Now of her losses by the late freeze: The orange crop was the principal and almost only one really worthy of serious consideration by the people of the State at large. True, most of the tropical trees and fruits in this tier of counties, and farther north, were killed, but they are only grown here mostly for home use. In the lower portions of the State, where they are grown as field crops, they are still alive and flourishing.

Of the 1,000,000 boxes of oranges produced this year, Manager Ives, *Bradstreet's*, and others of the best informed, estimate that one-half were still upon the trees when the freeze came, and that 90 per cent. of that was lost. These oranges were of best quality, and would, according to the estimate of the editor of the *Florida Times*, have netted the growers $2.30 per box, or $1,035,000; add to this the loss to pickers, packers and transportation lines, and still the loss is less than 1¼ million dollars, and this is purely a money loss.

From the same cold wave Texas lost $3,000,000 by the freezing and starving of her cattle alone, while from the States north of her come reports, not only of loss of property, but harrowing tales of suffering and loss of life, whole families having perished together. And now the papers are full of the great losses in Massachusetts by the floods—much greater losses than ours in value of property—coupled with statements of homes destroyed, and whole neighborhoods of people driven into the streets to subsist on the charity of others. How often are our sympathies excited by such tales coming from the West—often accompanied with the list of those who perished in the flood—the wreck-strewn track of which shows losses amounting to many times that of the Florida orange crop.

Drouth and grasshoppers have paralyzed for years in succession the prosperity of whole States, and brought the cultivators of the soil to want, and in many cases starvation was only prevented by the timely help from other States that for the time being were more prosperous. The word "cyclone" covers so much of loss and suffering that many people in the West shudder to hear it. Florida residents do not expect eternal exemption from misfortune, but feel thankful that by reason of our climate, many of the more serious ills of the North and West can never reach us here.

We feel the loss of our oranges, but it has increased our confidence in orange culture by showing us that the trees will stand a lower temperature without injury than we had supposed. The great tumble in real estate that many expected, has not come, but on the contrary, land is selling readily at as high prices as before the cold snap, and new groves are being planted in all directions. In Levy county 175,000 acres of land changed hands within 30 days after Florida's great freeze.

Hawk's Park,⊙ Fla.

* * *

For the American Bee Journal.

New and Novel Principles.

PROF. A. J. COOK.

Mr. Editor:—I wish you would repeat the excellent words of Mr. G. M. Alves, found on page 168, which are as follows: "I affirm that the Heddon principles *are* novel and cannot be found in literature or elsewhere. Let those who deny adduce the proof. The rubbish that has already been lugged forward does not deserve a critical man's attention."

Mr. Editor, I have no interest in this matter at all, only the grand interest of justice and fair play. For shame on us, if we are to repeat the Langstroth outrage! There is no bee-keeper of intelligence in the United States who has the faintest shadow of an idea that this hive, method or discussion would have been brought forward had Mr. Heddon kept silent. Mr. Heddon told me a year ago that he had a method that he believed would revolutionize our business. Why did I have to wait a year to know what it was? Only because it was original with Mr. H., and remained locked up a year longer. If any one honestly believes it, let him say it is a worthless hive and system. But, alack the day! when any considerable number of bee-keepers say it is not Mr. Heddon's. Firmly believing Mr. Langstroth to have invented the practical movable frame, I have ever stoutly maintained it; and I as truly believe Mr. Heddon to be the originator of the new system, and if found valuable, as I firmly believe it will be, I shall ever defend his rights.

Agricult. College, ♀ Mich., Mar. 23.

* * *

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The Bee Journal for 1886 and the Guide Book will both be sent for $1.30.

Local Convention Directory.

1886. *Time and place of Meeting.*

Apr. 8.—Southern Illinois, at Duquoin, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Apr. 9.—Progressive, at Macomb, Ills.
J. G. Norton, Sec., Macomb, Ills.

Apr. 10.—Union, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

Apr. 17.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

May 4,—W. N. Y. and N. Pa., at Randolph, N. Y.
A. D. Jacobs, Sec., Jamestown, N. Y.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

May 20.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bees Never Wintered Better.—John Rook, Muscotah,♂ Kans., on March 23, 1886, says:

My bees have wintered finely—never better. They commenced to gather pollen from the soft maples on March 17, and worked nicely for 3 days, but on March 20, on account of a snow storm, they all stopped, and as yet have not returned to duty.

A New Bee-Association.—Ferd Zastrow, Millhome,○+ Wis., Secretary of the Association, writes:

The Wisconsin Lake Shore Centre Bee-Keepers' Association was organized at Kiel, Manitowoc County, Wis., on March 25, 1886. The following officers were elected: E. Petermann, of Waldo, President; Jesse Roberts, of Meeme, Vice-President; Ferd Zastrow, of Millhome, Secretary; and Henry Peters, of New Holstein, Treasurer. They will have their first meeting on May 20, 1886, at Koering's Hall, in Kiel, Wis. Any bee-keepers in the counties of Manitowoc, Calumet, Fond du Lac, and Sheboygan, may become members.

Eggs that Produce Queens.—T. F. Kinsel, Shiloh,♂ O., writes:

On page 181, Mr. N. W. McLain correctly quotes Query, No. 185, as intended by me. I omitted the proper writing of "queen's." The question was caused by reading "Dzierzon's Theory"—a wonderful work—and from the answers to it, apicultural *savants* of the present, it seems, do not agree. I take it that the Query Department is for information, and so I propounded the question for that purpose. I thank Mr. McLain for his article; also others for opinions on the same.

Too Much Swarming.—Alex Rose, Sullivan,⊙ Ills., on March 26, 1886, writes:

I had 11 colonies of bees last spring, and now I have 23, all in good condition. I lost one. They went up into sections, ate all the honey, and then starved and froze, with about 25 pounds of honey below. I got about 1,000 pounds of comb honey last year. I am feeding my bees granulated sugar in empty racks and sections. I feed them in the hive in the evening to prevent robbing. My trouble with bees is to keep them from swarming to death. I cut out queen-cells and put back 40 swarms last year. I want a remedy for it.

Surface Measure of Foundation.—T. B. Longbottom, Kettleby, Ont., propounds this question:

Please state in the Bee Journal the superficial measurement, per pound, of comb foundation—both for the breeding apartment and for surplus honey.

[For the brood-chamber it is usually made from 5 to 6 feet to the pound; thin, for surplus honey, measures from 9 to 10 feet to the pound; and the extra thin is from 11 to 12 feet to the pound.—Ed.]

Disinfecting Foul-Broody Hives, etc.—A. W. Osburn, Cuba, W. I., says:

In answer to Mr. Pease's letter, page 137, I would say, in my opinion the roofs are not infected with the foul brood (unless it might be close around where the hives stood). With a coat of paint near where the hives stood, I think I would risk it. Knock the hives to pieces, and boil them *well*. Do not be afraid of boiling them too much. Put them together again and paint them. Extract all the honey you can, boil it, and keep it to feed to bees when needed. Melt the candied honey with a very little water; the wax will rise to the top, and the honey, with little evaporating, will be ready to feed. Serve all supers that are worth the trouble the same as the hives. The sections will make a bonfire—nothing else. If the work is done *well*, there will be no further trouble. Do not let your bees, or any one else's, get at your honey before it is boiled.

Uneasy Bees, etc.—G. B. Olney, Atlantic,♀ Iowa, March 25, 1886, says:

Last year I got 306 pounds of extracted honey from one colony of Italians, and sold 271 pounds of it at 16⅔ cents per pound, and the balance, thirty-five pounds, at 15 cents per pound. In the spring I started with 8 colonies, increased them to 20, by division. Three natural swarms absconded during my absence. I secured nearly 1,200 pounds of honey, 300 of it being comb honey, and the balance extracted. The extracted honey shows no signs of candying yet. It was gathered from heart's-ease. The interest in apiculture is increasing here, some are getting enthusiastic, some are talking Tennessee as the place to go and make bee-keeping a specialty. I received a postal card on March 19 saying, "Come, come, and tell me what to do with my bees; they are all crazy." I found them, 55 colonies, in a cellar 12x14x6 feet, tiered up one on top the other from the ground up. The brood-chambers were 12x14x14 inches in size. The bottom of the cellar was covered with dead bees; a few hives were polluted at the entrances, and some with a large cluster in front. Many bees were crawling around and were noisy. The temperature was about 45°. I recommended putting out the hives on the summer stands, so as to allow the bees a flight. The hives were quite full of honey when put into the cellar on Nov. 1; some also had brood. No extractor was used; but if it had been I think it would have been better for the bees, as the hives were undoubtedly too full of honey.

Drones Hatched in Worker Comb, etc.—T. J. Bell, Opelousas,⊙ La., on March 23, 1886, writes:

Bees in this part of Louisiana did very well last year. With 90 colonies to commence with, I increased my apiary to 106 colonies, and they gathered 9,600 pounds of honey, or nearly 100 pounds per colony. I lost 6 colonies by the heavy frost last January. My colonies have plenty of young bees, and they are still rearing brood fast. Our honey season is a month late this year. Will drones hatch out and develop in worker comb?

[Yes; but the drones will be correspondingly smaller, and Dzierzon claims that they are not fully developed.—Ed.]

A Brood-Chamber in Sections.—A. A. Fradenburg, Port Washington,○+ O., writes:

Six years ago I was called to a place 6 miles from here to transfer some bees, and among other hives there I found two that particularly attracted my attention then, and have very often been the subject of my study ever since. Out of one of them I took the bees and comb at the time; from the other the comb only, as the bees had died the preceding winter. The hives were well made of good lumber, and, by appearances, had been used several years. The brood-chamber was made in sectional parts; I should say that each sectional part was about 14 inches wide, 13 or 20 inches long, and 5 inches high, and the parts were interchangeable as well as reversible, if any one had thought of reversing at that time. Each hive had three sections or tiers on, but of course they had no thumb-screws to clamp the frames together. If I remember, they had stationary frames or strips fastened to hold the top and bottom edges of the combs. I do not know who made them, or whether they were patented.

Discussion and Controversy.—Dr. C. C. Miller. Marengo,♁ Ills., on Mar. 25, 1886, says:

I am glad to know that Bro. Clarke is in such a happy frame of mind, and that the appearance of warlike intent was only the ebullition of an unusual amount of good nature. I beg to assure Bro. Clarke that whatever the connection may imply, I had no thought of him in my mind, nor indeed of any particular individual in referring to either A or B. With regard to the meaning of the words "controversy" and "discussion," I used them as synonymous, and did not object to either, unless of the kind "we do not want." Nevertheless, Bro. Clarke, I think you will see "a shade of difference between the meaning of the words." You might discuss a subject upon which no one held opposing views, but can you imagine a controversy in which the idea of opposition is not involved? If you can, I should like to discuss it with you, and controvert your views, when next we meet.

Strong Colonies.—J. H. Larrabee, Larrabee's Point,+○ Vt., on March 24, 1886, writes:

I have 17 colonies of German bees. To-day I examined 2 colonies in chaff hives on the summer stands, and I found them strong in numbers. One that I could not see had eaten 5 pounds of honey; the other had consumed more honey, but had "rushed the season," having some capped brood. The past winter has been quite favorable for out-door wintering here; bees had several cleansing flights.

Snow-Storm, Reversing Frames, etc.—H. Clark, Palmyra,♀ Iowa, on March 30, 1886, writes:

A snow-storm reached us on Sunday, March 28, at 6 a.m., with an eastern wind, and it snowed 8 inches deep. The bees brought in pollen on March 24 and 25 from the soft maples. My bees have wintered finely. Mr. I. N. Boyles, on page 172, says that to reverse frames it turns the young bees with their backs downward. I would like to hear from others about this.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 5, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2lb. sections, 9@12c.

BEESWAX.—24@26c. per lb. Not much offered.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglassed sections, 12@13c.; the same in 2-lb. glassed sections, 9@10½c., and fair to good in glassed 2-lbs., 8@9c. Fancy buckwheat honey in 1-lb. unglassed sections, 10c.; the same in 2-lb. sections, glassed, 8@9c. Extracted, white, 6½@7½c; buckwheat, 5@6c.

BEESWAX.—27@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4¼c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 20@23c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—Stocks are being slowly reduced, some sales reported at 13 and 14 cts., the latter being for best honey in 1-lb. sections.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ apvance on above prices. Extracted in barrels, 5@5½.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 22@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.

BEESWAX.—Scarce at 25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted, 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—This market is very poorly supplied with honey of any kind just now, and comb honey in 1-lb. sectons, and extracted in barrels or kegs, is not equal to the demand. We quote: Choice white 1-lb. sections, 16@18c. White extracted in kegs or barrels, 7½@8½c.; dark, in same, 6@7c.

BEESWAX.—Scarce at 25@26c.

A. V. BISHOP, 142 W. Water St.

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50**. Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

ESTABLISHED IN 1861
AMERICAN
BEE JOURNAL
OLDEST BEE PAPER IN AMERICA

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19⅜x14½—Price 25 cents each.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

Advertisements.

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo.
4A1y

DISCOUNTS on early orders for Foundation. Samples free.—C. W. Phelps & Co., Tioga Ctr., N. Y.
13W2t

200 COLONIES of Choice Italian Bees for Sale. For terms, adddess
W. J. DAVIS. (box 148),
13W9t YOUNGSVILLE, PA.

BEE Hives and Sections.—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

SEED POTATOES.—Dakota Red and other new varieties—cheap. Send for price-list.
O. H. HYATT, Shenandoah, Page Co., Iowa.

TESTED Queens, $2; untested, $1. Wax-extractor, $3. Other supplies. Send for Circular.
O. F. BLEDSOE, Union Apiary, Grenada. Miss.
14W1t

FOR SALE.—Italian and Cyprian Bees and Queens (in any quantity), Extractors, Bee-Books, etc. Address, OTTO KLEINOW,
11Atf (Opp. Ft. Wayne Gate), DETROIT, MICH.

FOR SALE.—**30 Colonies Italian** BEES in good condition on 7 Langstroth frames, in shipping-boxes, $4.50; or shipped in Parker Chaff Hives, $6.50 per colony. Purchasers for the above can, if they prefer, send their Cash to T. G. Newman & Son, Chicago, Ills.
Wm. Amelang, Ottumwa, Wapello Co., Iowa.
13W2t

The Queen-Rearing Establishment

OF F. J. DOKOUPIL,

VIGAUN, OBERKRAIN, AUSTRIA.

	Apr.	May.	Jun,	July.	Aug,	Sep.	Oct.
Krainer Queen,	$2 00	$1.75	$1.50	$1,25	$1.25	$1.00	$1.00
Italian Queen,..	2.25	2.25	2.00	1.75	1.75	1.50	1.50
Syr. or Cypr. Q'n.	5.00	5.00	5.00	5.00	4.50	4.50	4.50
Ditto, home-bred,	3.00	3.00	2.75	2.75	2.50	2.50	2.50

We will send Queen-bees, by mail, postpaid, and guarantee them to be of the PURE RACES, at the above mentioned prices, for each queen. 9C3t

$3.50 CHEAP! $3.50

DURING May I will sell 2-frame (Langstroth size) Nuclei Colonies with Extra Tested Italian Queen, for $3.50 each. For further information, address, **F. W. MOATS**, THE BEND, OHIO.
14W1t

WANTED.—From 100 to 200 Colonies of Bees in a good location somewhere in the North. State prices and kind of hives.
Address, **A. CARDER**,
14W1t HEBRON, Boone Co., Ky.

90 Colonies of Bees for Sale.

ITALIANS and HYBRIDS in improved side and top boxing hives. Also all the appliances for running an apiary. On a pleasantly located farm of 30 acres in good basswood range (which will be rented if desired). Good house, barns, honey-house, &c. Scenery fine, location healthy, 12 miles south of Syracuse.
M. B. WARNER, 12 S. Salina St., Syracuse, N. Y.

200 COLONIES

OF

ITALIAN BEES

FOR SALE.—In Langstroth hives, wired foundation frames. Very low. Also 300 of our Improved Sectional Honey-Cases used with or without separators. Circular free.

A. J. & E. HATFIELD,
13Wtf SOUTH BEND, IND.

DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
14Wtf **MAZEPPA, MINN.**

REDUCED PRICES ON SUPPLIES.

One-pound Sections, $4.50 per 1,000. Two-pounds, $5.00 per 1,000.
Langstroth Frames, ready to nail, per hundred, $1.25.
Comb Foundation is subject to a discount of 5 per cent. until May 1.

Standard and Improved Langstroth Hives, cut and ready to nail, are reduced from 5 to 30 cents per hive, as will be noticed in the following table of **New Prices**:

STANDARD LANGSTROTH HIVES (14x18⅛ inches inside).

Quantity.	Numbers 1	2	3	4	5	6	7	8	9	10
5 hives, or more, each..	.90..	$1.25..	$1.60..	$1.45..	$1.75..	$1.20..	$1.70..	$2.00..	$1.30..	$1.30
10 hives, or more, each..	.88..	1.23..	1.58 .	1.43 .	1.73..	1.18..	1.68..	1.98..	1.28..	1.28
25 hives, or more, each..	.85..	1.20..	1.55..	1.40..	1.70..	1.15..	1.65..	1.95..	1.25..	1.25
50 hives, or more, each..	.80..	1.15..	1.50..	1.35..	1.65..	1.10..	1.60..	1.90..	1.20..	1.20
100 hives, or more, each..	.75..	1.10..	1.45..	1.30..	1.60..	1.05..	1 55..	1.85..	1.15..	1.15

IMPROVED LANGSTROTH HIVES—With Manipulating Side.

Quantity.	Numbers 1	2	3	4	5	6	7	8	9	10
5 hives, or more, ea..	$1.30..	1.65..	2.00..	1.90..	2.20..	1.65..	2.10..	2.45..	1.65..	1.65
10 hives, or more, ea..	1.28..	1.63..	1.98..	1.88..	2.18..	1.63..	2.08..	2.43.	1.63..	1.63
25 hives, or more, ea..	1.25..	1.60..	1.95 .	1.85..	2.15..	1.60..	2.05..	2.40..	1.60..	1.60
50 hives, or more, ea..	1.20..	1.55..	1.90..	1.80..	2.10..	1.55..	2.00..	2.35..	1.55..	1.55
100 hives, or more, ea..	1.15..	1.50..	1.85..	1.75..	2.05..	1.50..	1.95..	2.30..	1.50..	1.50

For description and prices of these hives nailed, we refer our customers to our Catalogue for 1886, pages 4 & 5. These prices for material in the flat, take the place of those on p. 6.

THOS. G. NEWMAN & SON, 923 & 925 West Madison St., CHICAGO, ILL.

I ARISE to say to the readers of the BEE JOURNAL, that

DOOLITTLE

has concluded to again rear QUEENS for sale during 1886, at the following prices:

Untested queen..	$1 00
5 " " ..	4 00
10 " " ..	7 50
20 " " ..	14 00
Untested queens reared by natural swarming, each, ...	$1 50
5 Do.	6 25
10 Do.	11 00
20 Do.	20 00
Tested queen.....	2 00
5 Do.	7 00
Tested Queen, reared by natural swarming..	$3 00
5 Ditto, ditto ..	10.00
Do. 1885 rearing, sent in May or after, each,.	5 00
Extra selected, 2 years old, each,............	10 00

Circular free, giving full particulars regarding each class of queens. Address,

G. M. DOOLITTLE,
14W1t BORODINO, Onon. Co., N. Y.

ITALIAN BEES AND QUEENS,

Plymouth Rock Eggs and Rabbits.

Send for Circular to, **C. WEEKS,**
14E4t CLIFTON, TENN.

EMPTY COMBS.

I WILL exchange 600 to 800 Empty Combs (mostly in wired frames) in Simplicity hives, for Basswood or White Clover Honey. Some one can get a bargain. Also good Sweet Clover Seed at 5 cts. per lb. per Express. **Queens, 3-Frame Nuclei and Full Colonies, a Specialty.** Write for particulars to, **E. T. FLANAGAN,**
14W1t (Box 995), Belleville, St. Clair Co., Ill.

BEES! **IN Two-Story BINGHAM HIVES, $5.00.**
L. C. KENT, WATSON, MICH.
14W1t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

LOOK HERE!

100 COLONIES of ITALIAN BEES at **$6.00** each. **50** fine Brown Leghorn hens at $1.00 each.
Eggs for Hatching,—White L., Brown Leghorns and S. S. Hamburgs, at $1.50 for 13 eggs; R. P. Games, at $2.00 for 13 eggs; Rouen Ducks, at $2.50 for 13 eggs. Address,
12A13t WM. LOSSING, Hokah, Minn.

DON'T READ THIS

UNLESS you want to buy BEES at reduced prices. Address, CHARLIE W. BRADISH,
13W2t GREIG, Lewis Co., N. Y.

60 Colonies of Bees For Sale.

FOR particulars, call on or address,
A. L. EDWARDS, Skaneateles, N. Y.
13Wtf

SOLD!

HAVING Sold the 100 Colonies of Bees offered in the March Numbers of this JOURNAL, I am now booking orders for **Nuclei Colonies and Queens Only.** Also **Bee-Keepers' Supplies.** Send for 1886 Price-List. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
14Wtf COLERAINE, MASS.

Sections and Berry-Baskets.

WE, the *original inventors* of the one-piece sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
13W13t MILTON, Trimble Co., KY.

DO YOU LOVE

Poultry, Cage Birds, Pet Stock?

SEND 5 cents for copy of illustrated monthly, telling you how to breed, feed and care for them; what to do in time of sickness; the best and latest remedies, &c., &c. Only **25 cents** per year. Address,

GUIDE AND FRIEND,
13W2t CLAREMONT, Surry Co., VA.

ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*
9W1y **J. M. JENKINS, Wetumpka, Ala.**

HOW to MONKEY with BEES

and Price-List of Apiarian Supplies. Sample of Foundation free for your address on a postal card.
J. W. Bittenbender, Knoxville, Marion Co., Iowa.
14Etf

COMB FOUNDATION!

Five per cent. Discount.

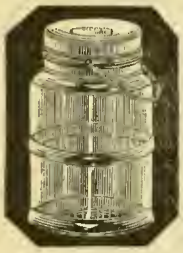
UNTIL May 1, 1886, we will give a Discound of 5 per cent. on all orders for Comb Foundation, from the prices quoted in our Price Lists for 1886. This reduction is made on account of the decline in the price of Beeswax.

CHAS. DADANT & SON, Hamilton, Ill.
THOS. G. NEWMAN & SON, Chicago, Ill

I WOULD like to make Contracts with persons wanting Bees. Geo. C. Broome, Martin, Tenn

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	**$1.60**
" 2 pounds " "	**2.00**
" 3 " " "	**2.50**

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

LARGE SALES—SMALL PROFITS.

THE 3rd Edition of "Handy-Book and Queen-Rearing," 300 pages, 100 illustrations, bound in cloth, by mail, ... $1 10
Book and sample latest improved Drone and Queen Trap, by mail, ... 1 50
Book and tested queen, any race (from June to October) 2 00
Book and warranted queen, ditto, ditto 1 75

Money Order office at Salem, Mass. Postage stamps will do for odd change. Send for Circulars.

12Atf **Henry Alley, Wenham, Mass.**

---

40 **COLONIES of ITALIAN BEES for SALE**, together with extra hives, frames and utensils. I intend to move away in the spring. Terms given upon application. **L. ADAMS.**
8E3t MAYFAIR, Cook Co., ILLS.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

C. B. LEWIS & CO.
51Atf. **WATERTOWN, WIS.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

W. Z. HUTCIHNSON,

In order to more fully supply the wants of his customers, has entered into partnership with his neighbor, R. L. Taylor, and will offer for sale, bees (full colonies, or by the pound), queens, Given foundation, white poplar sections, hives, cases, feeders, empty combs, etc., etc. Also hens' eggs, for hatching, of three varieties. For circular and price-list, address **W. Z. HUTCHINSON,**
8Etf ROGERSVILLE, Genesee Co., MICH.

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

TWO-POUND

SECTIONS.

Job Lot—Cheap!

WE have received a Job Lot of **25,000** One-Piece Sections with square groove, which we will close out at **$4.00** per 1,000, or $2.50 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ⅓ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

Alley's Drone and Queen Trap.

Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Given's Foundation Press

THE GIVEN PRESS stands in the front rank for manufacturing **FOUNDATION** in **Wired Frames**, as well as foundation for **SECTIONS**. Without a dissenting voice, all of our customers affirm its superiority.

Send for Circular and Samples.

J. R. CALDWELL & CO.,
1Atf HOOPESTON, Vermillion Co., ILL.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

12,000 SOLD SINCE 1876.

13th Thousand Just Out!

10th Thousand Sold in Just Four Months!

4,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

THE AMERICAN APICULTURIST

(ESTABLISHED IN 1883.)

WILL be mailed to any address for 3 months, on receipt of 25 cts. in stamps. **Sample copies free.** Address,
12Atf AM. APICULTURIST, Wenham, Mass.

Italian Bees and Comb Foundation.

50 to 100 **COLONIES** of very choice Italian Bees for spring delivery. Prices greatly reduced. Nuclei, Queens, and Bees by the pound for the season.

COMB FOUNDATION FOR SALE.

Wax made up by the lb. or worked for a share of the wax. Samples of foundation free. Price-List ready.

O. H. TOWNSEND,
10Etf ALAMO, Kalamazoo Co., MICH.

---

40 **CENTS per pound, boxed.** VonDorn's Dunham Brood Foundation. **Circular Free.** **T. L. VonDorn,** *Omaha, Neb.* **None Better**
12Atf

HEAD-QUARTERS IN THE SOUTH

For the manufacture of

Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

1886. ITALIAN QUEENS. 1886.

6 Warranted Queens for $5.

Write for circular. No circulars sent this year unless called for. **J. T. WILSON,**
3Ctf NICHOLASVILLE, Jessamine Co., KY.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
Ctf A. I. ROOT, Medina, O.

BEES, NUCLEI AND QUEENS.

AFTER June 1st, 1-frame Nuclei, with untested queen, $1.50; with tested queen, $2.50. Two-frame Nuclei, with untested queen, $2.00; with tested queen, $3.00. Queens from 75 cents to $3.50. For more frames in nuclei, add 50 cts. for each extra frame, and 50 cts. extra if with selected queen. These prices are for Italian or Carniolan queens, and by the dozen; for less, add 10 per ct. Write for price-list.

2C6t **A. J. NORRIS, Cedar Falls, Iowa.**

Carp

The National Journal of Carp-Culture,
—ESTABLISHED IN 1885.—
(8-Page Monthly, Illustrated, 50 cents a year.)

The only Journal in the United States devoted to the interests of Carp-Culture. Sample free.

Address, **L. B. LOGAN,**
2C6t **Akron, Ohio.**

WEBER'S MAGAZINE

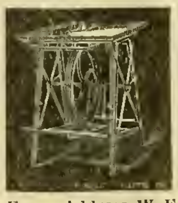
OF

HUMAN CULTURE

Devoted to Physical, Mental, Moral, and General Self-Improvement, will be sent for the next **THREE MONTHS FREE** to any one who says where he saw this, and sends us his address, together with 10 cents to pay postage, etc. Remember that this chance is not open long and should be accepted at once. We have secured a number of the most able contributors who will supply our colums during 1886 with choice articles upon those all-important subjects. It is worth its weight in gold to everybody. Subscription price is only $1.00 per year. Agents wanted everywhere. Address,

M. S. WEBER, Pub.,
1C6t FARMERSVILLE, PA.

BARNES' FOOT-POWER MACHINERY.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7 in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 484 Ruby St., Rockford, Ill.

FREE A book of 160 pages on **LOVE** & Courtship, sent free by the Union Pub. Co., Newark, N. J. Send 5c. for postage.
11A8t

PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
11Atf O. CLUTE, **Iowa City, Iowa.**

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. April 14, 1886. No. 15.

Aim at Excellence, and excellence will be attained. This is the greatest secret of success and eminence. "I cannot do it" never accomplished anything. "I will try" has wrought wonders.

* * *

Mr. N. W. McLain's Report on experiments in apiculture, which was read at the Detroit Convention, has just been received. It was a Report made to the United States Entomologist, and is published by the United States Department of Agriculture. We shall give it in the BEE JOURNAL as soon as it is possible to find room for it.

* * *

Transferring Bees should be done while the fruit trees are blooming. The honey obtained from the fruit blossoms will stimulate the bees to repair the damaged and mutilated combs.

* * *

Bees and Grapes.—C. M. Clay, in the *Southern Planter*, gives this testimony :

> If the bees could puncture the grapes, one being found, as the grape is much richer in sugar than the melon, it is logical to suppose that they would attack the grape in force ; but no such action takes place ; a few bees find the broken hulls and suck the juices, but I have never seen any indication of a perforation of whole-skinned grapes.

* * *

Weak Colonies in the Spring will need care and attention. Mr. F. L. Dougherty, in the Indiana *Farmer*, gives the following hints concerning them :

> From various causes some colonies come out weak in the spring. Such will require much care to build them up ready for the honey harvest when it comes, and unless they are got into working condition by that time, they are worse than useless capital. In their weak condition they can increase but very slowly for lack of heat, and should be assisted as much as possible, by the closing up of all space whereby the heat may escape. Entrances should be made small, so that they may be able to protect themselves from the depredations of robbers. They will breed very slowly at first, but with plenty of stores easy of access, they will grow rapidly as the weather becomes warmer. Later in the season they can be assisted with frames of hatching brood from stronger colonies.

Dr. Miller, in his new book, carefully describes in detail the work that should be done all through the year, beginning with the taking of the bees from their winter quarters, and carrying the apiarist on day by day until the bees are again safely placed into winter quarters. In his preface Dr. Miller says :

> I have no expectation nor desire to write a complete treatise on bee-keeping. Many important matters connected with the art I do not mention at all, because they have not come within my own experience. Others that have come within my experience I do not mention, because I suppose the reader to be familiar with them. I merely try to talk about such things as I think a brother bee-keeper would be most interested in if he should remain with me during the year.

* * *

Telling the Bees.—The Cincinnati *Enquirer* gave this item on the subject to the world in a late number of that paper :

> A cottager leaned whispering by her hives,
> Telling her bees some news as they lit down,
> And presently a bee, a great bee, golden bee,
> That appeared to be the watch-dog of the treasury,
>
> Shot like a ball from out the waxen town,
> And on the nose of cottager serenely sat him down,
> Saying, "Excuse this liberty, Oh, pretty maid divine,
> But I have news to tell thee, in return for news of thine."
>
> The maiden didn't linger long a-whispering to the bees,
> But struck a frightful galopade, her hair upon the breeze,
> And the howls that she emitted, as she danced, and pranced, and ran,
> Were heard, the neighbors tell me, clear from Beersheba to Dan.

But the *Enquirer* must be sadly imposed upon—

For that poet, never saw it—
  Not a bit, did he ;
Else he'd know it, failed to do it—
  Did that "golden" bee.

* * *

Honey Season in California.—Mr. D. Wood, of Santa Barbara, writes thus to the Indiana *Farmer* dated March 15 :

> This has been the coldest winter here for many years. We had one genuine hail-storm, the first I have seen. It was very fine, but plenty of it, and the montain peaks were covered with snow. Nevertheless flowers bloom, and last year's tomato vines are still bearing. Some of last year's apples are still on the trees, while others have young apples as large as small hens' eggs. My bees are storing honey rapidly. Some have a two-story hive full above and below —about the same as two Langstroth hives placed one above the other. To-day I transferred three colonies, cutting and fitting comb and honey, in the middle of the apiary, with 100 colonies at work, and not a robber bee came near me. Bits of broken comb and honey have been in open air, not two rods from the hives, untouched for several days. I found several queen-cells ready to seal. Honey is plenty in the field, and transferring can be done in the yard.

* * *

The Bee-Sting Remedy for Rheumatism was lately tried by a man living in Georgia, which resulted as follows, says an exchange :

> Divesting himself of his clothing, he got into bed and covered up, and told his attendant he was ready. A swarm of young bees was then put into the bed with him, and the remedy commenced. It took four men to bring him back to the house, and it would have required forty to have put him in the bed again. He still has the rheumatism.

Mr. T. F. Bingham, of Abronia, Mich., has just returned from Central America, where he secured a colony of stingless bees, and has brought them home with him, to ascertain if they will thrive in this climate. As they are of but little use as honey-gatherers in their tropical homes, they will probably not be of much value in this cold climate. On last Thursday Mr. B. wrote us the following item concerning them :

> My Central American bees flew out to-day, and brought in pollen. They are in good condition ; none worth mentioning having died on the trip. I am glad I brought them home with me, and I believe I shall be able to learn their habits this summer.

* * *

Honey in Virginia.—This is what the Richmond *Dispatch* says about that "*new* industry" in the South :

> The production of honey is becoming an important interest in Amherst. One of the citizens got from his hives, last year, 2,000 pounds, and another (this a Northern man) about 3,000. The Italian bee is preferred, and these (the queens) are sent away or received by mail. What the bee-men call "foundation" is made by hand, and this is put into the hives, and upon this the bees build. Honey without the comb sells at 10 cents, with the comb 35 cents, and when I inquired the reason for this difference in price, I was told that the honey can, by a certain process, be forced from the comb, and that the combs thus emptied are placed in the hives and again filled by the bees, and much time and labor is thus saved to them. Honey, say those who have given this new industry a fair trial, pays better than tobacco.

That is not such a bad description for one who knows nothing about honey-production.

* * *

Why is it Called the Honeymoon? asks an exchange. Honey, because it is full of s(e)ells ; and moon, because it "comes high."

* * *

New Price-Lists have been received from the following persons ;

Bright Brothers, Mazeppa, Minn.—24 pages —Bee-Keepers' Supplies, Bees and Queens.

W. G. Russell, Millbrook, Ont.—15 pages—Bee-Keepers' Supplies.

H. H. Brown, Light Street, Pa.—22 pages—Bees, Queens, and Bee-Keepers' Supplies.

A. Snyder, Indian Fields, N. Y.—1 page—Bees and Queens.

Eureka Mower Company, Utica, N. Y.—24 pages—Mowers.

Smith & Smith, Kenton, O.—24 pages—Implements in Bee-Culture.

J. W. Eckman, Richmond, Texas—5 pages —Bees, Queens, and Comb Foundation.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

* * *

We have Just Received from the publishers a copy of the poem "Ostler Joe," which is published in neat pamphlet form, with about forty other choice recitations. "Ostler Joe" is the poem, the reading of which by Mrs. Potter in Washington Society a few days ago, caused such a sensation. J. S. Ogilvie & Co., publishers, 31 Rose Street, New York. Price, 12 cents.

* * *

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

QUERIES

WITH

REPLIES by Prominent Apiarists.

Reversing Brood-Combs.

Query, No. 235.—When reversing a set of brood-combs will the bees leave the honey where it is if they have no surplus apartment on the hive?—C.

I think not. but never tried it.—C. C. Miller.

Bees, as a general rule, store their surplus above the brood, but it depends upon circumstances as to whether they will remove sealed honey, as you state the question. I have never known them to change the position of their sealed stores in the late fall or winter months. Bees are slow to remove sealed stores at any time, because it must be done at considerable loss. Our bees here will leave their sealed stores in "patches" all over the brood-nest, though it is the chief source of our winter losses, during severe winters.—G. W. Demaree.

It will depend upon the season and the yield of honey. The claim is that reversing sends the honey into the sections in a hurry; the claim is incorrect. however, in so far as experience shows it not to be the case at all times, and we must have further tests to prove that it really has any effect at all in this direction.—J. E. Pond, Jr.

That depends upon what the bees are doing. If at a time when all colonies are inclined to fill the brood-combs, they would leave the honey where it is; if, on the other hand, breeding is going on rapidly, the honey would be fed out to the brood. Before the advantages of inverting combs can be appreciated, the operator must learn *when* to do it.—James Heddon.

Using Old Combs.

Query, No. 236.—I have a lot of old combs from last year, some of them taken from hives where the bees had died; the latter contain dead brood and considerable bee-bread: would it be safe to give these combs to the bees again without extracting the brood therefrom? and would the old bee-bread be likely to work injury to the bees?—W. J. C.

It would be safe, but do not give too many at a time.—W. Z. Hutchinson.

I think it would be safe to give the old combs as they are; but I should prefer to melt them into wax and give foundation.—H. R. Boardman.

To use these carefully one at a time would, I think, be entirely safe; especially in good, vigorous, strong colonies.—A. J. Cook.

I should prefer to melt up such combs and use foundation. The old bee-bread would do no harm.—G. L. Tinker.

Give one at a time to strong colonies, and no injury will come therefrom; but, on the contrary, your combs will soon be as nice as ever.—G. M. Doolittle.

Where there is much dead brood, we would object to using old combs. If the bee-bread is too old and spoiled, the combs had better be melted over. Try one comb in a populous colony and see what they do with it. If the bee-bread is spoiled, they will cut it out, and throw it away.—Dadant & Son.

Such combs as contain much dead brood, I should work into wax after cutting out and burying the portions containing the dead brood. The bees will quickly clear out the old bee-bread.—James Heddon.

Likes and Dislikes of Bees.

Query, No. 237.—Can persons control bees that can control themselves? or do bees distinguish any one except by their actions and motions? Some people think that they are the special favorites of bees, while others must stand at a distance or suffer the consequence.—H.

I think that actions pretty much decide the matter, although odor and color may have something to do with it.—C. C. Miller.

I have never been able to discover that bees had any personal preferences or prejudices; but they show a very decided aversion to some kinds of texture in clothing worn, such as fur or fuzzy woolens, and perhaps to some colors in clothing.—H. R. Boardman.

Yes, with the assistance of a good smoker. I did think, years ago, that bees took especial pains to go across the street to sting me, but now I think differently.—H. D. Cutting.

I think that "some people" are mistaken in this regard. The problem hinges on the *how*, and not by whom, bees are treated. To your first question I say *yes*.—James Heddon.

Yes. I have never seen any one of ordinary coolness but that could handle and control a colony of bees. The superstitions of the dark ages are fast dying out, and ere long we shall all learn that there is no mystery whatever in bee-management.—J. E. Pond, Jr.

To the first part of the question, my answer is no It requires several traits combined in the person, to make him a successful manipulator of bees. If I was going to point out the *ground-work* of a successful apiarist, it would be a *lasting interest in bees.* Everything else by close application can be acquired. Two-thirds of the people believe that bees "hate them," and the other third, that they can manage bees as they please. There is nothing in the whole thing except that the man who is unfit for the bee-business, is unfit for it.—G. W. Demaree.

Prevention of all Increase.

Query, No. 238.—I have 22 colonies which I wish to work for comb honey and avoid all increase next summer; how may I do it?—G.

This is a rather hard nut to crack. We would advise using large brood-chambers, and attracting the bees into the sections early, by giving them, here and there, a section partly filled from last year.—Dadant & Son.

By using reversible hives, possibly; otherwise it is difficult. Why not get one swarm from each colony?—A. J. Cook.

It does not appear to be possible to prevent all increase in a good flow of nectar in working exclusively for comb honey; nor is it desirable.—G. L. Tinker.

I never could succeed in doing such a thing, nor do I think the most comb honey could be secured in that way even if successful.—G. M. Doolittle.

I am not certain that it can profitably be accomplished: but I would suggest hiving a swarm in a new hive upon the old stand, putting on a queen-excluding honey-board, then the surplus-cases. and over this put the old brood-nest. Allow no queens to hatch in the old brood nest, and when the bees are all hatched shake them out in front of the hive. A hive with a loose bottom-board would be needed.—W. Z. Hutchinson.

The ways are varied, depending upon location, season, and varieties of bees. After all were known it would require 2 or 3 columns to describe one course of management, and then some one would say that the plan would fail.—James Heddon.

Convention Notices.

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.
B. F. Carroll, *Sec.*

☞ The next annual meeting of the Western N. Y. and Northern Pa. Bee-Keepers' Association will be held at Randolph, N. Y , on May 4, 1886.
A. D. Jacobs, *Sec.*

☞ The DesMoines Co. Bee-Keepers' Association will meet at the Court House in Burlington, Iowa, on Tuesday, Apr. 27, 1886, at 10 a.m. Any articles sent to the President, Mr. Geo. Bischoff, at Burlington, for exhibition, will be well cared for and returned or sold, as the sender may direct. A cordial invitation is extended to all interested in bee-keeping.
John Nau, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall, N. W Corner of Main and 11th Sts., (entrance on 11th St.), at Kansas City, Mo., on Apr. 29 and 30, 1886. The Cable Line can be taken from the Union Depot for 9th and Main Sts. The following essays will be read: "The Honey Market," by Clemons, Cloon & Co.; "Bee-Keeping in Iowa," by E. Kretchmer; "Best method of handling bees for comb honey," by A. A. Baldwin; "Missouri Bee-Keeping," by J. D. Pearce; "Does bee-keeping pay as a pursuit?" by Jos. Nysewander; and "Invertible Frames and Hives," by J. M. Shuck.
P. Baldwin, *Sec.*

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ○+ east; +○ west; and this ♂ northeast; ˋ○ northwest; ○ˎ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal

Bee-Keeping as a Business.

WM. F. CLARKE.

From his well-known and often-urged views on the subject, it was to be expected that Mr. Heddon's book would strongly advocate bee-keeping as a specialty, and deprecate all attempts to make a side-show or mere appendage of it. We may well believe that Mr. Heddon's most conclusive arguments in favor of apicultural specialism are marshalled in the chapter devoted to that topic. On examination, these will be found condensed into one—the great advantage of concentration on a given pursuit. This is, no doubt, a forcible argument in all cases to which it is applicable, but we must not forget that it is only to those of a certain cast of mind that the argument applies at all. Those who, as phrenologists phrase it, have concentrativeness large, will, no doubt, accomplish most by bringing all their powers to bear on one focal-point; but there are many people who cannot do their best at one particular pursuit, and would feel themselves toilers in a treadmill, if tied to only one line of activity.

"Many men—many minds." You cannot make one rule apply to all. One man will run several different lines of business, and throw immense energy into every one of them; while another finds it all he can do to keep one a-going. One man finds it a refreshment to turn to something different from what he has been at, and he switches off and on with perfect ease; another finds his thoughts confused and his fingers all thumbs if he makes a sudden change in what he is doing. Whether it is better for a man to be a *whole man* to some one pursuit, or to divide himself up among several, depends upon the man himself—whether he be an indivisible or a divisible man. So you cannot lay down cast-iron rules to govern everybody.

Very probably the proverb, "Jack of all trades and master of none," will be quoted here, but are there not many people who have only one trade or business, and do not master that very well? Men are like steam-engines—some have scant power for the task assigned them, while others have any amount of surplus power. It is like steam hissing at every joint and rivet. Is it not wise to turn it to some good use? Yes; make it run a crank of some kind, and do something more and better than merely make a noise in the world.

The question whether a few colonies of bees can be kept with pleasure and profit can only be decided by the testimony of those who have tried it, and I do not hesitate to say that is overwhelmingly in the affirmative.

Mr. Heddon certainly is badly mistaken when he says apiculture has "little connection with farming." Why, it is a branch of farming. Bees are as much part of the live-stock of a farm as chickens, ducks or sheep. In Britain, no farm is considered properly stocked, unless there are on it from six to a dozen hives containing bees. On a farm you can keep bees without any danger of annoying your neighbors, while in a town or village they are apt to become a nuisance in the confectioneries, groceries, and cook-sheds. If you own a farm, your bees mostly pasture in your own fields, and you can grow honey crops on purpose for them. The long noon resting-spell could have no better or more pleasurable employment than that of watching the bees. It may be true that "less pleasure and profit has been derived from the few colonies of bees kept on the farm, than from any other branch of mixed husbandry, when taken all in all, one year with another," as Mr. Heddon asserts, but the proof is a a-wanting, and I do not think will be forthcoming. I will pit a hive of bees against a cow or pig any day, and if I cannot get more pleasure and profit out of the bees than out of either cow or pig, I will own myself wrong, and Mr. Heddon right.

It is very encouraging to have an experienced honey-producer like Mr. Heddon express confidence in bee-keeping as a specialty, notwithstanding a downward tendency in the market. I believe that tendency will operate until honey becomes about the same price as sugar. When higher than sugar, it is a luxury; when the same price as sugar, it becomes a necessary. The demand for luxuries is always more or less limited, but the demand for necessaries is practically unlimited. It will take a good deal of tact and industry to produce honey as cheaply as sugar, but I believe we are on the eve of accomplishing this feat, and that Mr. Heddon's book will prove a mighty factor in achieving this result.

Mr. Heddon is wisely cautious in refraining from holding out fictitious inducements to people to embark in bee-keeping, but does he not fall into the other extreme of being too repressive? He says he would not advise those "who are failing in other lines of business to try ours." Well, now, I would. It is those parties who have not yet found out their mission, who should try something else. It is a great thing to find out what we *cannot* do, as well as what we *can*. We make both these discoveries by trying. I know the ditty says,

> "If at first you don't succeed,
> Try, try again;"

but sometimes fair trial proves want of adaptation so conclusively that it is the part of wisdom to try something else. Sometimes incapability is manifest enough without trying. A lady was once distributing religious tracts among the patients in a hospital. As she passed on after giving a man a tract, she was surprised to hear him burst out laughing. On asking the cause of the sudden fit of merriment, "Why, ma'am," said he, "you've given me a tract on 'The sin of dancing,' and I've had both my legs shot off!" Some people are as manifestly unfit for bee-keepers as a man without legs is unfit for dancing, and all such had better give the business a good letting alone.

It is a great surprise to me that Mr. Heddon should say, "I do not consider bee-keeping adapted to the gentler sex." Why it is not adapted to them he does not state, except inferentially, when he says he does not want his daughter to compete with men in this labor. Now I believe that bee-keeping is just one of those pursuits in which women *can* compete with *man* to advantage, and if there were any insuperable difficulty in the way before, Mr. Heddon himself has removed it by inventing a hive, and devising a system of manipulation which more than halves the labor needful in an apiary. The exertion required to lift full-sized hives, was the one objection I should have urged against women becoming bee-keepers. That objection exists no longer. There is only a half-hive to lift when lifting is required, and by wintering bees out-of-doors on my hibernating stand, the necessity of lifting or carrying hives, is almost wholly done away with. With no strain on the muscles demanded now, in what particular cannot women compete with men as bee-keepers? Their perceptive powers are keener than those of men, their patience is greater, and their perseverance is proverbial—"If she will, SHE WILL, you may depend on't;" and these are the prime qualities demanded in an apiarist. It is said a good surgeon must have "a lion's heart, an eagle's eye, and a lady's hand." So must a good bee-keeper.

I predict that when Mr. Heddon's book and hive become more widely known, there will be a great rush of the gentler sex into bee-keeping. So many have succeeded under the old, clumsy, cumbrous methods, that with a hive no larger than a lady's work-box to handle, the temptation will be irresistible to many ladies who are on the look-out for some not over-laborious method of earning a livelihood. There is much in bee-keeping that suits woman's cast of mind, in fact the whole manipulation demanded is of that gentle, quiet kind which harmonizes with woman's nature, and I venture to predict, that, on the new method now before the public, the ladies will enter the lists of apicultural workers both as competitors and assistants to an extent as yet unparaleled in the history of bee-keeping.

Guelph. Ont.

For the American Bee Journal.

Comb Honey vs. Extracted Honey.

CHAS. SOLVESON. (40-64).

As I am the propounder of Query, No. 153, I have been much pleased with the discussion it has brought forth. When I read Chas. Dadant & Son's article on page 759 of the AMERICAN BEE JOURNAL for 1885, where they try to prove that Mr. Doolittle was mistaken in his estimate, that with extracted honey at 8 cents per pound comb honey could be produced at 12 cents per pound, with equal profit to the apiarist. I felt certain we should sooner or later have an article from Mr. Doolittle on the subject; and on page 58 Mr. D. gives us facts and figures which tend to prove that comb honey can be produced for *less* than 12 cents per pound, with the extracted at 8 cents per pound. Although I am not ready to accept anything less than 12 cents as the comparative cost of a pound of comb honey, to 8 cents per pound for extracted honey. I feel certain it is nearer right than Messrs. Dadants' 20 cents per pound.

On June 10, 1884, I selected 20 colonies as nearly alike as possible, and worked 10 for comb honey, and 10 for extracted honey. Those worked for comb honey were in 8-frame Improved Langstroth hives, with section-cases similar to Mr. Heddon's, and they produced, on an average, 70 pounds of honey in one-pound sections. Those worked for extracted honey were in 10-frame Simplicity hives, and they were all supplied with an upper story filled with combs, and they produced, on an average, 120 pounds of extracted honey each; which at 8 cents per pound, amounts to $9.60. This divided by 70 pounds (the average amount of comb honey produced by each of the 10 colonies), gives about 13¾ cents as the comparative cost of comb honey. And in the fall each one of the 20 colonies had to be fed from 8 to 15 pounds for winter stores, although I had not extracted a pound from the brood-chambers of either.

Again, on June 15, 1885, I selected 20 colonies and worked one-half of them for comb honey, and the other half for extracted. Those worked for comb honey were in the same kind of a hive as those in the first experiment, but were contracted to 5 combs, at about swarming time. I obtained 24 pounds per colony on the average, from those worked for comb honey; while I got only 30 pounds from each of the colonies worked for extracted honey, and they were provided for as those of the year before. This at 8 cents per pound gives $2.40; and if we divide this by the average number of pounds of comb honey produced by each colony, we have only 10 cents as the cost of comb honey, with the extracted at 8 cents. Again I had to feed every one of the 20 colonies from half to three-quarters of their winter stores. I will add that the season of 1884 gave only about two-thirds of an average crop; and the season of 1885 was the poorest of any that I have known since keeping bees.

Mr. Heddon's new book, "Success in Bee-Culture," is the most practical work of its kind that I have ever read. It is intended for those who keep bees for the money there is in them, and they cannot well afford to be without it.

Nashotah, Wis.

For the American Bee Journal.

Have Bees a Language?

J. M. HICKS.

The bees doubtless possess a language at least peculiar to themselves. The inarticulate sounds of the bee, which are instinctively uttered, are very readily understood by its own species. The expression of ideas is but the acknowledging of those sounds as representatives of our ideas. Then, properly speaking, the conveyance of ideas from one to another, either by sounds or gestures, becomes a language as soon as those ideas are understood between two individuals. Were it not so, the mute would be as isolated from the associations of man, as the insect world. That man actually holds converse with the bee, receiving and transmitting ideas, is as true as that these are received and transmitted to and from the mutes.

If I give a gentle rap on the side of the hive, every bee with a short, buzzing noise answers from within. This idea they have conveyed to me. A little harder rap conveys the idea to them that something is wanted outside, and immediately some of them make their appearance at the entrance of the hive and fly around. This actually conveys to me the idea, "Who is here?" They have simply taken this way to say, "Who is here, and what do you want?" "I want some honey." The bees, not fully understanding my remark, necessary to convey the idea to them, I attempt to approach the hive for this purpose; they immediately catch the idea and answer by a sharp, shrill sound, "You cant' have it Mr. H., stand back, we shall defend our home." I get a faint impression that the bees are becoming a little irritable, or a little too free with their threats, so I bring my hand up as though I said, "Don't get in my face." The bees immediately answer, "We have the same right to your face, that you have to our honey; and suiting the action to the ideas they wish to convey, they slip a dozen or two ideas into my face and eyes from their business ends. I now fully understand; I have exchanged thoughts with the bees by actions, and am very sure that if I cannot talk to them, their language is perfectly intelligible to me—just as much so as if words had been exchanged.

Let a bee find a sweet in any place, how soon it brings its sister inmates of the hive to assist in carrying it to their home. In swarming time, if the queen cannot leave the hive with them, how soon the bees that have left become acquainted with the fact, and return to the parent hive. Take the queen from a colony, and you will soon see how soon the whole colony becomes acquainted with the loss. Give a queen to a colony that is queenless, and how soon a manifestation of pleasure and activity will be seen about the hive. As if by common consent, they change their former course of conduct; whereas they were continually constructing queen-cells, they now as rapidly destroy them and commence to carry in pollen in anticipation of the wants of the young bees that are soon to be added to their number.

From every appearance it is certain that the bees possess a language by which they very readily and quickly communicate with each other. They project and carry out certain parts of their labors, according to conditions, with a fidelity of a united action that would do credit to what we might term more intelligent and rational beings.

Battle Ground, Ind.

For the American Bee Journal.

The Hibernation of Bees.

C. W. DAYTON.

Since the friends to the theory that bees hibernate, have put in a disclaimer of the condition "quiet," and have accepted torpor instead as the prime constituent, it leaves the whole theory dependent upon temperature, and temperature only. By actual tests when the bees were not breeding, I have found the temperature in different sized colonies, and at different distances from the center of the cluster, to vary from 52° to 72° when the temperature outside the hives was 43° above zero; but this cannot be the temperature of the bodies of the bees, because when they are clustered in a high temperature the temperature at the center of the cluster is lower than it is when the bees are clustered in a lower temperature. The difference in temperature is caused by the difference in compactness of their clustering.

About a year ago I made tests on colonies that contained brood, and I found the temperature at the center of the clusters to be about 88°, and 71° at the sides of the cluster. The bees in these colonies appeared as still as death, and were as torpid as bees usually get; yet the temperature was high. A high temperature warrants respiration, and respiration shows that there is no hibernation about it if torpor must be a constituent. Is it a fact that a bee cannot breath the smallest breath without lengthening and shortening its abdomen to an extent as to be readily visible by the naked eye?

It has been said that 41° or 44° is the best temperature to induce the quietude or hibernation of bees. This in itself is a great mistake, as that is nothing more than the temperature in which bees will remain quiet in the event of a suddenly appearing light. If the temperature is raised, the bees will continue to be quiet the same as before, until the light appears; 41° or 44° is a temperature sufficiently warm for bees to be comfortable without activity, and yet be cold enough to hold them in the cluster in the presence of the light; though a foul atmosphere, moisture in the hives or need of a cleansing flight, may sometimes have so strong an influence that it is impossible to find a quieting temperature. In a general sense, 41° or 44° is the turning point between the quietness of bees and the activity to which bees resort when exposed to low temperature. It is the lowest point at which bees may be quiet (hibernate), but not the highest, by any means. I do not doubt but that Mr. Ira Barber's bees maintained quiescence (mistaken hibernation), in a temperature of 60°, but remember that he did not show them the light. To an ordinary philosopher it may be seen that the hibernation theory, based upon torpor alone, must fail.

But this is not all. Without regard to temperature, and notwithstanding the greatest quiescence which live bees are able to enter into, when I hold my ear close to the tops of the hives, without an exception, there is a considerable buzzing, as of wings, to be heard at any and all times, that cannot be heard from the bottom of the hives. Now where there is noise there must be activity. It is absurd to consider a man to be more than quiet while he continues to be noisy. (The idea has been entertained that live bees may become more than what is understood by the terms "quiet" and "quietude.") How this buzzing sound is produced I am, as yet, unable to tell, but I am confident that it will not be met with very successful opposition. I call it the snoring of the bees during their nap, and ask all interested bee-keepers to direct their observations with the hope of ascertaining if this is not true. This last may well illustrate the fineness of the points on which the substantiation of the hibernation theory turns.

Bradford, ♂ Iowa.

* * *

For the American Bee Journal.

"Feeding Sugar—Reversible Hives."

CHAS. DADANT.

The article of Mr. Hutchinson, under the above heading, on page 152, has greatly astonished me, especially where he says: "Mr. Heddon does not claim to have originated the idea of tiering up hives, but of tiering up brood-chambers. He does claim that, whether prior as an inventor of this process or not, he was the first to make it public." And further: "Everybody knows that whoever used, or did not use a two-story brood-chamber, Mr. Heddon was the first to place the idea before the public."

If Mr. Hutchinson will turn to the BEE JOURNAL for 1861, page 149, and the same for 1866, page 71, he will see that these horizontal sections, or cases, were described in this country 25 years ago. In his *Feminine Monarchy*, published in 1634, 252 years ago, Butler shows hives in 4 sections piled one above the other; Bevan, in his *Honey-Bee*, in London, 1838, says that *storifying* hives were described in England by John Geddes in 1675. I have a book, published in Paris in 1734, in which the author, after describing the horizontal, sectional hives, adds that these hives are commonly used in Poitou and Limousin, where sometimes these sections are piled 5 feet high. I have another book by J. Simon, printed in 1740, praising also the *ruches a hausses* (Eke hives).

I do not think that it would be difficult to find 100 bee-writers, English, French, Italian, German or Danish, describing such hives. Nearly all these bee-keepers of old used a wire drawn between the sections, to cut the combs, before separating the sections.

Palteau, in 1750, in his *Nouvelles constructions de ruches utiles* (new building of useful hives), advises the use of a perforated top for every section. Later, in 1821, Radouan, in his *Manuel*, advised the use of triangular bars, under which bees could build their combs.

But the bee-writer, who came the nearest to the Heddon dividing hive, was C. Soria, who, in 1845, published his *Notice sur la ruche a espacements*, (Notice on the *space* hive). In this hive every story, about 5½ inches high, had triangular bars at top and bottom. These bars were fixed so as to leave a *small space* between the stories which could be separated, reversed, etc., without any cutting of comb. What do you think of the *newness* of the *grandest* of all the *grand* features of the Heddon hive, Mr. Hutchinson? This hive did not give as good results as was anticipated, the dividing of the brood hindering the laying of the queen. I tried these *space* hives 23 years ago.

The reversing of hives (*culbutage*) has been practiced in France, in the province of the *Gatinais* for an immemorial time. Now it is every year more and more abandoned on account of the necessity of feeding back to the bees, which are deprived of all their stores. Not only this feeding back decreases the profits, but, if made sparingly, the net result is a clear loss. Besides, if made during a dearth of honey, it incites robbing, and it takes time, and time is money.

FEEDING SUGAR TO BEES.

Messrs. Hutchinson and Heddon will reply that sugar syrup is better than honey for winter. Is Mr. Heddon right in thinking that he was the first to proclaim that "practical success in wintering bees depends upon proper food and temperature?" Perhaps this notion is as old as the divisible brood-chamber. I have given my views on this subject, in an article read at the National Bee-Keepers' Convention held at Lexington, Ky., on Oct. 5, 1881, under the heading, "Influence of Honey on Wintering," page 325 of the AMERICAN BEE JOURNAL for 1881. Mr. Newman would oblige me, and help the solving of the question of wintering, by reproducing it. Five years have elapsed since I wrote that article, and I think that the varied winters that we have experienced since 1881, have but proved the correctness of my views.*

Had Messrs. Heddon and Hutchinson followed the rules which I gave in the above-mentioned article, their losses of last winter would not have been half so heavy. It is not when the winter stores are of first quality, as they were this year, that we need to use sugar syrup; but when the honey is unwholesome for bees. It is easy for the bee-keeper to foresee his chances of wintering without taking the unnecessary trouble of replacing, every year, the provisions of his bees, with sugar syrup; for such replacing costs time and money.

Hamilton, ♂ Ills.

[*We will republish the article referred to, as soon as space will permit.—ED.]

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For the American Bee Journal.

Observations in Bee-Culture.

H. O. KRUSCHKE.

In reading the "Observations upon Drones," by Rev. L. L. Langstroth, on page 614 of the AMERICAN BEE JOURNAL for 1885, I was forcibly reminded of what I experienced in 1883. It was my desire to increase my stock of bees as much as possible, and I wanted drones as early as I could get them. On May 10 I inserted a frame of all-drone comb into the hive of my strongest colony. I fed the colony liberally, and two days afterward two-thirds of the frame was filled with eggs, the weather having been fine and warm. I congratulated myself upon my success. The weather soon changed to cold and cloudy. The eggs in the frame remained just as laid, and not until May 26 could I find any larvæ, and then only a very few. The eggs were still there, and hatched gradually as circumstances became favorable, or not until the bees were furnished food. Now, I think with such facts before us, it is not proper to say that eggs will hatch in so many days after being laid, but rather in so many days after they are changed from eggs to larvæ, or have been furnished with food. I do not doubt but what some eggs were there a month before they underwent any change.

Another observation: On July 7, 1884, I found that my bees were without stores, and I feared that they would starve. A few of my choicest colonies I fed. In most of the hives not a cell full of honey could be found.' The bees flew quite freely, and from outward appearances they were doing well. Under these circumstances I expected that breeding would be light, if not suspended entirely. But such was not the case; the brood continued to spread, and the hives became populous as fast in those whose colonies had not been fed as in those that were fed. This condition of things continued until the last days of July. Now, I presume that there was honey enough brought in to feed the brood; but I thought that during the day a little ought to accumulate for feed in the night, but in many of them I did not see a drop of honey for over two weeks. It made me nearly sick to look at them, still they seemed not to suffer.

Still another observation: Whenever a laying queen is removed from a colony, and I look them over a day or two after, I find that the eggs have been removed. I do not know as it is the case in every instance, but I have found it true so often that I take that as the rule. Is that in accord with the "doctors."

Necedah,⊙ Wis.

For the American Bee Journal.

Queens Reared Artificially.

10—J. C. MISHLER, (23-18).

Mr. G. M. Doolittle, on page 86, says: "My queens reared under the swarming impulse, and those so reared that are purchased of others, have lived to be 3, 4, and some even 5 years of age, doing good business all those years; while I have never purchased but one 'dollar' queen that lived 2 years, and three-fourths of them never lived over one year."

I wish to say to Mr. D. that most of my queens are reared "artificially," but I have never reared any in small nuclei hives. My queen-cells are reared in full colonies that are strong in bees. I proceed as follows:

I take out the queen with a frame of brood, and place it in a nuclei hive with 2 other combs, and put it in a new location. Then I take a frame that is full of eggs and young larvæ (having prepared it for the bees to start queen-cells) from the colony from which I wish to breed, and put it in the centre of the now queenless colony which was prepared for the new comb. My queens are 1 and 2 years old the coming season, except one imported Italian queen which is 3 years old. Last season my bees worked on red clover, and really deserted white clover for the red.

I will make Mr. Doolittle the following offer: I will send him one of my 1-year-old pure Italian queens in exchange for one of his 1-year-old pure Italian queens; and if the queen which I send him does not do good service for the next 3 years (unless she is killed by the bees or the colony dies in winter), I will send him two dollars for his queen; and if the queen he sends me does not do the same for me as my queen is to do for him, he is to pay me two dollars; the exchange to be made in the month of May.

The first season I went into the bee-business I reared all my queens "artificially," and the colony of one of them cast a swarm when she was 4 years old, which absconded, and she did good service all this while. I have examined my bees, and there are no signs of diarrhea whatever, though there is plenty of pollen in the hives.

Ligonier,♂ Ind.

For the American Bee Journal.

Hibernation—The Lamp Nursery.

W. Z. HUTCHINSON.

Mr. Clarke says that starved and chilled bees do not hibernate, in his "opinion." Starved and chilled ants, hornets, flies, etc., *do* hibernate; they at least take no food, and are in a freezing temperature. When I was a boy I helped my father in splitting rails, and we frequently found cavities in the logs in which were large ants; these ants, especially in early spring, were dormant; sometimes there was frost in the crevices about them; and to all appearances the insects were dead; but they revived in the warmth of the sun. Now I *know* that bees never enter this state.

I visited Mr. R. L. Taylor, the past winter. Under his barn is a cellar; in one apartment are his cattle, in another, poultry, and in another, bees. All of these living creatures staid in the cellar all winter, they moved about, the cattle in their stalls, the fowls in their coops, and the bees in their hives; they all consumed food, and all enjoyed the warmth that is necessary for their existence. Did all hibernate? When an insect requires warmth and food, and indulges in motion, it does not hibernate in the sense in which that word is usually understood. Mr. Clarke, in speaking of the hibernation of bees, calls it *their kind* of hibernation. "Their kind of hibernation" is simply the well-known *winter quiet*, which, in Mr. Clarke's opinion, is hibernation in a *slight degree*. The only way in which I can make the hibernation theory even *appear* reasonable, is to take that view of it, viz: to *call* the well-known winter quiet, a slight degree of hibernation, and in so doing we discard a very appropriate term for a misleading one, and—gain what?

THE LAMP NURSERIES.

Mr. Alley, on page 183, asks how I manage my lamp nursery at night. I explained, in my former article, *how* I managed. I examined each queen-cell in the evening, by the light of a lamp, and put each cell (the occupant of which showed signs of soon hatching), into a little apartment by itself. When so carefully examined, but few queens will hatch inside of 10 or 12 hours. As soon as "up and dressed" in the morning, the nursery is visited, and if any queens *have* hatched, they have not been out long enough to do much if any damage. No, *sir*, I do not sit up nights with my lamp nursery; and I do not lose more than a dozen queens in the course of the season by their hatching out when I am not around.

Mr. Alley keeps his nuclei queenless three days, and then introduces a queen that is old enough to become fertile the same day. I introduce a queen a day or two old *at the time of removing the old laying queen.* It does not seem to me as though either had much the advantage over the other; possibly Mr. Alley gets a day or two the start of me, but he gets it in being successful in introducing older queens than I have succeeded in doing. Queens can be kept in the nursery and supplied with food until they are several days old—perhaps 5 or 6 days—but I have never been able to make a practical success of introducing them after they were more than 3 days old. Will Mr. Alley please tell us if, in his opinion, the keeping of young queens in a queen-nursery is the *cause* of his successful introduction of them at 6 days of age? Or is it his *method* of introduction? Or is it both? Does he use one of the methods of introduction that are given in his book, if so, which one? If it is not given in his book, will he please give it?

I have never tried the queen-nursery simply because I could see no advantages in its use over the lamp-nursery; if there are advantages I shall use it; and thank Mr. Alley for calling my attention to it. How does it answer late in the season?

Rogersville,♂ Mich.

For the American Bee Journal.

Have Bees the Sense of Hearing?

10—S. A. SHUCK, (64-43).

In reference to the above question, Mr. Fox, on page 171, says: "I would like to hear from others on this subject." I am very much surprised to recognize the fact that few if any of our prominent writers on apicultural subjects are able to give any proof that bees do hear.

On page 729 of the AMERICAN BEE JOURNAL for 1885, in some experiments by Sir John Lubbock, he says: "It is, however, remarkable that bees certainly do seem to hear on some occasions." Again he says: "Bees will take no notice of a very loud noise, even quite close to the hive;" and Mr. Fox, in his criticism of Mr. Osburn's article, says: "I would like to ask Mr. O. why bees do not notice a loud noise around their hives, which we all know they do not."

It appears from the above quotations, that because bees do not become enraged, when, perchance, some one should "halloo" across the way, or the children in their play, forget, and shout aloud, they do not notice even a very loud noise about their hives. I trust that Mr. Fox, or any one who may read this, will not smile aloud, if I say that all loud sounds, if of a musical nature, have a charming influence over bees; at least not until they have given the following a fair trial:

Remove one of the central combs from the hive of a colony of gentle bees, but do not disturb them, so as to anger or frighten them. Still, pleasant weather is best.

The bees will be found moving about quietly and in every direction on the comb. Now, while holding the comb in your hands, (but do not let your breath strike the bees), whistle a prolonged, keen whistle with the lips, sing a familiar stanza in loud tones, blow a loud horn or give a prolonged loud tone in any way, and observe the death-like stillness of your little hearers, and notice how quickly they all resume business when the noise ceases, and how quickly all hands "let up" again when the music begins; and say not again that we all know they do not notice a loud noise about their hives.

These experiments can be made without removing the combs, if you have an observatory hive. I can present many other reasons for believing (knowing), that bees *do* hear; but perhaps the above are sufficient for the present.

Liverpool, ⊙ Ill.

For the American Bee Journal.

Essentials to Success in Bee-Culture.

OSCAR F. BLEDSOE.

A great many on a superficial view, are fascinated with bee-keeping as a pursuit, with the impression that the labor is light, the pleasures connected with it unalloyed, the remuneration great in proportion to labor, etc., etc., and raking up what spare cash is on hand, rush into it with all the zeal of a novice. I would say to all such, "Make haste slowly;" if you have a decided case of bee-fever and cannot rid yourself of it, I would say, pitch in, but don't go faster than your knowledge. Bee-keeping requires deep study and thought, nice mechanical skill, great industry and careful attention to details, indomitable perseverance, and at times, a high degree of faith—that faith which is "the substance of things hoped for, the evidence of things not seen."

Bee-keeping will not do to depend on for a support until you have mastered it and know exactly what you are doing. It is better as a side-issue where one can look for his main support elsewhere. I would lay down the following rules as, in my experience, the best for guidance in this pursuit:

1. In the beginning, do not spend too much money—be content with small things—supply yourself freely with bee-books and literature—do not be economical on this point; then get a few colonies of black bees to be Italianized afterwards, and read and observe. Make your own hives; beware at first of the enticing circulars of supply-dealers; make the bees pay their way—let them be creditors, not debtors, and you will find if you act on this rule, they will supply you with what you need in their management and give you a surplus besides.

2. Study the subject thoroughly. Bee-keeping is a highly intellectual pursuit. It brings you into close communion with the mysteries of Nature and with the God of Nature. There are many theories connected with it and much chaff given forth. The mind has to cast off all this, and with nice discrimination arrive at the essential truth. You cannot read and observe too much; let your mind become fully saturated with the subject, and you will thus become "thoroughly furnished," not only unto abundant success in the pursuit, but you will find that you will achieve great intellectual improvement generally. Bee-keeping is an educator, and this is one of its chief fascinations to me. I can approach other branches of knowledge more successfully from having thoroughly analyzed this.

3. Adopt Italian bees, for in their purity they are superior to any race yet discovered. In your hives, adopt a plain, movable-frame hive. Avoid any kind of hive or system calling for too much manipulation and management. The bees must be examined often enough with the simplest hive, and should for their good be let alone, except where it is absolutely necessary to manipulate; besides, it is economy not to interfere too much. Let "cheap Italian labor" do your work as far as possible; only on this principle can you conduct large apiaries.

In conclusion I will say that as to profit, bee-keeping will, if conducted cautiously, surely pay moderately, at least, and in many cases it will pay largely.

Grenada, ♁ Miss.

For the American Bee Journal.

Conveniences for the Apiary.

W. M. CHAPEL.

I keep my bees away from home in two or more localities, and visit them daily, which necessitates moving twice a year—out in the spring and home in the fall. I use the Lewis'-Improved Langstroth-Simplicity hive with tight bottom-boards, or I make them so. To prepare the hives for moving the bees, I have originated a very cheap device which is made as follows:

Plain a lath on all sides, cut off a piece long enough to reach the full width of the hive-portico inside; cut a notch on one side 8 inches long and ½-inch deep, and nail over it a piece of wire screen; on the opposite side in the centre, cut a notch ⅜ of an inch deep by ½ or ¾ of an inch long and place it in the portico with screen down on the side next to the hive. Drive in a small wedge at one end to tighten it and keep it in place, and the bees are ready for transportation, with plenty of ventilation. Take out the wedge at the end, turn it upside down, keeping the screen next to the hive, and the entrance is contracted any size desired. I have used these successfully in the spring and in the fall to retain heat and prevent robbing. I can, by the use of these, prepare a load of bees for transportation in a few minutes at any time.

Another implement which I have devised from necessity, is a frame-holder, which I make of hard wood, it being stronger for the size of pieces. I take two pieces 21 inches long by 1½x⅞ inches, bore ½-inch holes in both ends of each piece for side pieces; then take two more like pieces, 12 or 13 inches long, as desired, and bore them the same way. Now take four pieces 12 inches long, the same size, cut round tenons on one end of each to fit the holes snugly. Place the end-pieces on the top of the sides, run the tenon through the holes on each corner, and it makes a frame with four legs that will hold 8 or 10 frames. This can be made to fit any size of frame. Pull out the legs and it falls to pieces, which, being tied with a string, occupy very little space.

I found it a necessity to have some sort of a tool-box in which to carry manipulating tools, which I constructed of ½-inch boards, except the ends and cover which are made of ⅝-inch lumber. The box is 9½x10x13 inches, in which I can carry a large smoker and fuel for it, hammer and nails of all sizes, some wire-screen, tin shears, veil, brush-broom, screw-driver to open covers and other pieces stuck down with propolis, a comb scraper which I had made of steel by drawing it out into a blade similar to a putty-knife, though much stronger and larger, being 6 inches long and 2 inches wide at the end of the blade, which is square and drawn to an edge. The other end is narrower on which is riveted a piece of wood on each side for a handle, similar to a butcher-knife. This implement will scrape off propolis or old comb, wax, etc. It is the best of any I ever used.

This tool-box I have found to be of the greatest convenience, as I have all the tools necessary at hand at all times and places, and can repair and put to right anything about the apiary on short notice, as I always carry it with me.

Kingston, ⊙ Wis.

Convention Notices.

☞ The annual meeting of the Northern Ohio Bee-Keepers' Association will be held in the New Town Hall at Wellington, O., on Friday, April 30, 1886. All are invited to come and help make the meeting both pleasant and profitable. A special invitation is extended to the ladies. The officers of the Association will be elected at this meeting.

H. R. BOARDMAN, *Sec.*

☞ The next meeting of the Linwood Bee-Keepers' Association will be held in Condit's Hall at Rock Elm, Wis., on Saturday, May 1, 1886, at 1 p.m. All interested in bee-keeping are cordially invited to attend and make this a profitable meeting.

B. J. THOMPSON, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages).............	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages).............	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

Local Convention Directory.

1886. *Time and place of Meeting.*

Apr. 17.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders. Sec., LeGrand, Iowa.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Apr. 30.—Northern Ohio, at Wellington, O.
H. R. Boardman, Sec., E. Townsend, O

May 1.—Linwood, at Rock Elm, Wis.
B. J. Thompson, Sec.

May 4,—W. N. Y. and N. Pa., at Randolph, N. Y.
A. D. Jacobs, Sec., Jamestown, N. Y.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

May 20.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Good Prospects.—J. S. Scoven, Kokomo,⊙ Ind., on April 1, 1886, writes:

I commenced in the spring of 1884 with one black colony of bees, increased it to two, and took no surplus honey. I commenced in the spring of 1885 with 2 colonies, increased them to 6, and took a surplus of 175 pounds of fine comb honey. I winter my bees in large store-boxes, well packed in forest leaves. My bees are all alive, and brought in the first pollen on March 18. Bees are wintering well in this county, and the prospects for the coming season are good.

Malaria from Bee-Cellars.—J. H. Andre, Lockwood,♀ N. Y., writes:

I would like to hear, through the Bee Journal, whether those who have made a practice of wintering bees in cellars under dwelling-houses for a number of years, consider that it makes the cellar unhealthful for those living in the house above it. Some here contend that wintering bees in a cellar creates a poison which will produce malaria. I hope that those who have had much experience will kindly give their opinion. The 3 winters that I have had my bees in the cellar we have had a great deal of sickness called "malaria." I do not know that the bees caused it, but if they do cause such diseases the sooner we find it out and provide some other place for wintering, the better it will be for us. I would also like to ask if in making hives it would be a good plan to cut the pieces for the body of the hive just the exact length that one wishes the size of the hive inside, and then put them together by nailing through one-quarter-round moulding both ways, and thus save mitering them, which is quite a job unless one is somewhat skilled with tools. A lap-joint we all know is good for nothing in constructing bee-hives.

Fastening Frames in Hives.—J. M. Goodrich, South Frankfort,⊸ Mich., says:

To fasten frames in Langstroth hives, I have two iron rods of ¼-inch iron made with a small ring on one end and a nut on the other that can be turned up by hand, and as long between the ring and nut as the hive is wide. I drive a headless nail into each end-bar, near the bottom of the frames, letting them project ¼ of an inch. I now make four holes in the sides of the hive, so that when the frame are in, and the rods are pushed into the holes, they will come against the frames and rest on the nails in the end-bars. Screw it up tight, and the frames will be fastened. Make the holes in the sides of the hive large enough to give a little play, and cover them with washers. When you wish to take out the frames, remove the nut and take out the rods.

Only 2 Colonies Lost.—Mexico Sperry, La Harpe,⊸ Ills., on April 3, 1886, says:

I wintered my bees on the summer stands, and lost only 2 colonies out of 28. The 26 are in good condition.

Are the Drones Pure?—R. F. Holtermann, Brantford, Ont., writes:

The last reply to Query, No. 230, interested me. I will not attempt to answer the Query; I cannot. But we know that the sperm-sac in the queen is filled not only with myriads of ever moving bodies, one of which fertilizes each egg, but the fluid surrounding it—all from the drone. It is by many careful students supposed that this is absorbed in the system, in part at least, who will say it is not so with the queen. We know that the queen after fertilization, and often before having undergone any apparent physical change, at least to the naked eye, externally, will have a new and more graceful carriage, and these sperms in the sac kept alive year after year, who will say there is no exchange between the contents of the sac and the organs of the queen? May the relationship not after all be more intimate than we might at first think, as great as in the higher animals? And may the drone not have a greater effect upon its male progeny than we might at first be led to suppose?

Wintering Bees—Old Drones.—W. H. Tuttle, Creston,♀ Iowa, on March 30, 1886, writes:

Bees are all right yet. I have but 15 colonies, and have wintered them in a bee-shed which is perfectly tight, except the south side which is boarded half way down from the top in order to shade the bees. I have chaff cushions with upper ventilation in the hives, which are 4 to 6 inches apart, also the same distance from the north side of the shed. They were packed in tightly between and all around with forest leaves. I use the Langstroth hive with 8 and 10 frames. I divided several colonies last summer, and all did well. I bought 2 colonies in the spring of 1884, but some how one of them I suppose lost their queen, at least the bees were all gone out of the hive before I knew any thing about it; they left plenty of honey. The hives were close side by side. I then got an Italian queen, and when the bees were busy at work I put the queen-cage into the empty hive with the queen in it, carried the old stand 4 or 5 rods away, put the other in the place of the old one, and the bees went in with the new queen, all seemingly satisfied. They then ate through and let the queen out of the cage on the third day. In about six weeks they sent out a large swarm. I want to learn the best method of wintering bees. I shall continue as I have done if they continue to winter as well as they have the past two winters. My neighbors lost all they had; I lost one colony which I think was caused by the queen's dying. Having a few warm days the last of February, the bees came out quite thickly in front of the hives, and I then noticed two drones from two different hives. I had always heard that the drones were all killed off in August or September.

Working on Early Bloom.—C. Weeks, Clifton,♀ Tenn., on April 1, 1886, says:

My bees have wintered without loss, and are now working on peach and other early blooms.

An Old Colony.—J. S. Barb, Bristolville,♂ O., on March 25, 1886, writes:

In the fall of 1884, I had 14 colonies of bees; in the spring of 1885, I had only 4, and one of those was very weak. I built up the weak colony to a good one, bought a swarm on June 11, and got a large swarm from it on Aug. 12. I had a colony to keep on shares, and I got a good swarm from that, so in the fall I had 13 colonies, and had taken 200 pounds of comb honey. I have lost but 2 colonies so far this winter. An Italian colony which had a Southern queen that I obtained in 1883, gave me 4 good swarms, and nearly 45 pounds of honey besides. How is that? The old colony and all the swarms are alive and in good condition now. I gave the swarms frames of comb, which I had saved. I had 31 colonies last fall, and now I have 28. My father has a colony of bees that I call the "Old Veteran." It is in a large box-hive, holding as much as a salt barrel. It was put into this hive on June 20, 1870, and has stood the storms of all the severe winters that we have had since then. It stands right at the wood pile where we chop, saw and split wood every winter, and it has had no protection except the cap of a Langstroth hive filled with straw placed on top of the hive. This year I have a chaff cushion on top of the hive. We get some honey from this hive every year, and a year ago last summer we got over 30 pounds; last year only about 15 pounds, as it cast a large swarm on July 8, which produced about 20 pounds of honey. This old colony is of a stock of bees that have been on the place for 50 years. Father got his bees first in 1837, his father having had bees in 1836.

Hard Weather for Bees.—I. R. Good, Nappanee,♂ Ind., on April 8, 1886, says:

On April 6 we had a terrible snow-storm. Snow fell to about the depth of 15 inches. The mercury was 17° below freezing this morning. Bees have come through the winter in fine condition, but this weather must be hard on them.

Cold Weather for April.—B. W. Peck, Richmond Centre,♂ O., on April 6, 1886, writes:

Reports from different localities are interesting. I have to report very cold weather for this time of the year. It has been cold, freezing weather for about a week, and it is now snowing hard with about 6 inches of snow on the ground. I took 5 colonies out of a clamp on March 15, and 2 were dead, 1 was weak, and the other 2 were fair. Twenty-five out-doors, packed in chaff and sawdust, have wintered well; so it will be seen that so far my loss is 2 out of 30. I think that I shall not lose any more, although this weather will give them a set-back. White clover looks well.

Honey-Dew for Winter Stores.—H. T. Hartman, Freeport,⊸ Ills., on March 30, 1886, writes:

From reports that I have read in the Bee Journal, it seems as though bees have wintered well nearly all over the country; but through this part of the State they have wintered very poorly, half of them already being dead; some have lost all they had. The cause of the heavy loss of our bees was the honey-dew, of which they gathered a great deal last summer, as honey was very scarce. They had most of this black stuff for winter stores. To prove that honey-dew was the cause of our loss, I would say that last fall 30 colonies out of 82 were light in stores. They were fed 34 pounds of coffee A sugar about Sept. 20, and were all numbered. They were all taken into the cellar about Dec. 1, and about Feb. 1 those that had honey-dew became uneasy and diseased. On March 1 it was very warm, and the bees were all taken out of the cellar and placed on the summer stands. The sugar-fed colonies were all in splendid condition, strong and healthy. Nearly all those having honey-dew had the diarrhea. As the weather was nice and warm for 3 days, I cleaned things up as well as I could; some were queenless, and some were very weak, which were united; a good many were put into clean hives, and some were supplied with honey. As the weather became colder on the fourth day after they were out, they were all taken into the cellar again, where they shall remain until there is something for them to do. I have already lost 12 of the colonies having honey-dew stores, and a great many are too weak to pull through. It is snowing again to-day, and it does not look as though bees could come out of the cellar for some time yet. A good many bee-keepers here did not return their colonies to the cellar again. As most of them are weak it is very hard on them, considering the much snow and cold we have now had for over a week.

Division-Boards, Straight Combs, etc.—Cyrus G. Pugsley, Denver,⊸ Mo., asks the following questions:

1. What is the use and advantage of a division-board, and how is it they are made? 2. How can I cause my bees to build straight combs? I am often bothered a good deal by crooked combs, and they being fast to two or more frames. (I use home-made Langstroth hives.) 3. Are the hives advertised by Mrs. Lizzie Cotton good, practical hives? 4. I wintered my bees in the cellar, and they came through all right with plenty of stores. I put them on the stands about a month ago, fearing my cellar was too damp, and I found some moldy comb in one hive, and lots of brood in all stages in every hive.

[1. A division-board should be made just to fit the hive, and its use is to contract the brood-chamber in the spring, or to force the bees into the sections.

2. Use full sheets of comb foundation.

3. It is an ordinary frame hive, perhaps just as good, but certainly no better than the ordinary Langstroth hive which will cost less than one-half the price asked for the "Controllable."

4. The bees will clean up the moldy combs as soon as the weather becomes dry and warm.—Ed.]

Were they Hibernating?—A. C. Fassett, Watson,♀ Mich., on April 4, 1886, writes:

Since reading so much of late on hibernation, and especially Mr. Clarke's article on page 197, I would like to relate a little circumstance. It is as follows: Last November, when I put my bees into the cellar, I found that one colony which I had neglected to feed, was in a dormant condition I thought they were dead, but I took them into a warm room and brushed all the bees off the combs into a large pan, when I saw some of them begin to move. I immediately put the combs back into the hive, emptied the bees on them, put on the cap or cover without the honey-board, put warm feed under the frames, and closed the entrance, and soon they were all right. I fed them enough, and they came through the winter all right. A few days ago one of my neighbors told me that one of his colonies had died, but upon examination I found that they were in the same torpid state as mine were. I then poured some warm syrup on their backs, and they immediately came out of their sleep. What is this condition of the bees called? They were just as dormant as a wasp ever was. Were they hibernating, in a trance, or is there some wasp blood about them? How long would they live in this condition? My bees have wintered with no loss so far.

Cold and Windy.—C. W. Dayton, (116–116), Bradford,♂ Iowa, on April 8, 1886, says:

The snow is not all gone, and we are now having the eighth day of a cold north wind. Pollen will not appear for some time yet. I have not taken the bees out of their 148 days' confinement, and will not unless it gets warmer. I have colonies packed on the summer stands that have not had a flight for 140 days. It beats all how cold it is!

Italian Bees, etc.—W. M. Barnum, Angelica,♀ N. Y., says:

I would like to have the following questions answered in the Bee Journal: 1. Would you oblige me by giving a short history and full description of the common Italian bees? 2. What is the best food for bees through April? 3. Which is considered the best bee-hive?

[1. For a full description and history of Italian bees, we refer to any of bee-books. It would be too long for our columns.

2. Honey.

3. The Langstroth, or any movable-frame hive, is good enough for general purposes.—Ed.]

Disagreeable Weather.—J. Nebel & Son, High Hill,⟜ Mo., on April 3, 1886, writes:

The time has now come, in Missouri, to take bees from their cellar confinement and place them on the summer stands; but the weather has been so bad all this week that we could not do it. We have worse weather now than we had all winter, only it is not so cold, the temperature being 24° above zero. It has been snowing some nearly every day and night. We have now 4 inches of snow, and it continues to snow. Our bees are all apparently in good condition so far. We have lost only one colony out of 189. We hear that our farmer bee-keepers have lost heavily.

Anticipating a Good Harvest.—Jacob Oswalt, Maximo,♂ O., on April 6, 1886, writes:

I wintered my bees in chaff hives on the summer stands, and they have come through the winter nicely, except one colony, and on examination I found that to be entirely destitute of bees, with the brood-chamber full of drone comb. They are all strong now, have plenty of honey in store, lots of brood, and are in every way in a healthy condition. We are expecting a grand ingathering of honey this summer. Bees all over Northeastern Ohio, that were properly cared for in the fall, are getting along well. We are now passing through a severe snow-storm from the northeast, and now the snow is about one foot in depth, and still it is snowing. What effect it will have on the bees, time will tell.

◆

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 12, 1886.

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2-lb. sections, 9@12c.
BEESWAX.—23@24c. per lb. Not much offered.
R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote : Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.
BEESWAX.—27@28c.
McCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.
BEESWAX.—25 cts. per lb.
BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4¾c.; dark and candied, 3¾@4c.
BEESWAX.—Quotable at 20@23c., wholesale.
O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—Stocks are being slowly reduced, some sales reported at 13 and 14 cts., the latter being for best honey in 1-lb. sections.
BEESWAX.—Scarce at 25c.
M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½.
BEESWAX.—Firm at 22½c. for prime.
D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.
BEESWAX.—In demand at 22@25c. for yellow.
C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.
BEESWAX.—Scarce at 25c.
A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted, 5@6c.; Southern, 3½@4c.
BEESWAX.—23c.
CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—This market is very poorly supplied with honey of any kind just now, and comb honey in 1-lb. sections, and extracted in barrels or kegs, is not equal to the demand. We quote : Choice white 1-lb. sections, 16@18c. White extracted in kegs or barrels, 7½@8½c.; dark, in same, 6@7c.
BEESWAX.—Scarce at 25@26c.
A. V. BISHOP, 142 W. Water St.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

◆

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices :

Single copy, 5 cts. ; per doz., **40** cts. ; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

Golden Rules for successful advertising, are these : 1. Attractive display. 2. Salient points clearly stated. 3. Repetition. Don't spend all your money in one insertion. 4. Choice of the Paper which reaches the people you want to reach. *These rules never fail.*

◆

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.**, in either **English** or **German.**

◆

Alsike Clover Seed.—We can furnish Alsike Clover Seed at **$8.50** per bushel—or **$2.25** per peck. These prices will take the place of those published in our Catalogue, until further notice.

◆

There will be a Rush for supplies needed in the apiary after awhile, and we cannot do better than to urge all to look over their stock, ascertain what will be needed, and get it on hand before it is necessary for use—thus avoiding the perplexity consequent upon its possible delay in reaching them in time.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.00, postpaid.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

Advertisements.

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo.
4A1y

200 COLONIES of Choice Italian Bees for Sale. For terms, adddess
W. J. DAVIS. (box 148),
13W9t YOUNGSVILLE, PA.

BEE Hives and Sections —Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

FOR SALE.—Italian and Cyprian Bees and Queens (in any quantity), Extractors, Bee-Books, etc. Address, OTTO KLEINOW,
11Atf (Opp. Ft. Wayne Gate), DETROIT, MICH.

20 SIMPLICITY Hives with Italian Bees, bred 10 years from Imported mothers, at $6.00.
15W3t A. L. GOULD. Ridgeville, Iroq. Co., Ills.

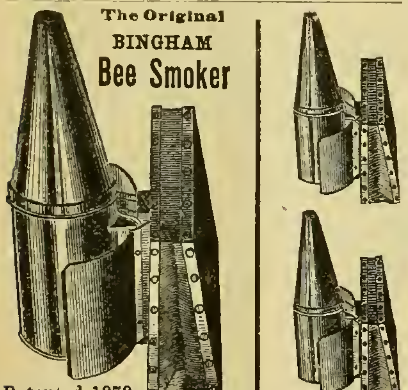
SECTIONS and FOUNDATION.

1-lb., all-in-one-piece, V-Groove, $4 per 1000. Less for lots of 10,000 and Price-List.

40c per lb. for heavy. 50c " " light. Send for Samples

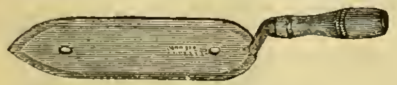
A. F. STAUFFER & CO.,
15D2t STERLING, ILLS.

DISCOUNTS on early orders for Foundation. Samples free.-C.W.Phelps & Co., Tioga Ctr., N.Y.
13W3t



Patented, 1878.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)..	3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)....	2½ " ..	1 50
Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker	2 " ..	1 00
Little Wonder smoker..........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 Inch........		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
15Atf ABRONIA, MICH.

REDUCED PRICES ON SUPPLIES.

One-pound Sections, $4.50 per 1,000. Two-pounds, $5.00 per 1,000.
Langstroth Frames, ready to nail, per hundred, $1.25.
Comb Foundation is subject to a discount of 5 per cent. until May 1.
Glass, 5x6, per box of 240 lights, reduced to $2.50.

Standard and Improved Langstroth Hives, cut and ready to nail, are reduced from 5 to 30 cents per hive, as will be noticed in the following table of **New Prices:**

STANDARD LANGSTROTH HIVES (14x18⅜ inches inside).

Quantity.	Numbers 1	2	3	4	5	6	7	8	9	10
5 hives, or more, each..	90..	$1.25	.$1.60..	$1.45..	$1.75..	$1.20..	$1.70..	$2.00..	$1.30..	$1.30
10 hives, or more, each..	88..	1.23..	1.58..	1.43..	1.73..	1.18..	1.08..	1.98..	1.28..	1.28
25 hives, or more, each..	85..	1.20..	1.55..	1.40..	1.70..	1.15..	1.65..	1.95..	1.25..	1.25
50 hives, or more, each..	80..	1.15..	1.50..	1.35.	1.65..	1.10.	1.60..	1.90..	1.20..	1.20
100 hives, or more, each..	75..	1.10..	1.45..	1.30..	1.60	1.05..	1.55.	1.85..	1.15..	1.15

IMPROVED LANGSTROTH HIVES—With Manipulating Side.

Quantity.	Numbers 1	2	3	4	5	6	7	8	9	10
5 hives, or more, ea..	$1.30..	1.65..	2.00..	1.90..	2.20..	1.65.	2.10..	2.45..	1.65..	1.65
10 hives, or more, ea..	1.28..	1.63..	1.98..	1.88..	2.18..	1.63..	2.08..	2.43.	1.63..	1.63
25 hives, or more, ea..	1.25..	1.60..	1.95..	1.85..	2.15..	1.60..	2.05..	2.40..	1.60..	1.60
50 hives, or more, ea..	1.20..	1.55..	1.90..	1.80..	2.10..	1.55..	2.00..	2.35..	1.55..	1.55
100 hives, or more, ea..	1.15..	1.50..	1.85..	1.75..	2.05..	1.50..	1.95..	2.30..	1.50..	1.50

For description and prices of these hives nailed, we refer our customers to our Catalogue for 1886, pages 4 & 5. These prices for material in the flat, take the place of those on p. 6.

THOS. G. NEWMAN & SON, 923 & 925 West Madison St., CHICAGO, ILL.

200 COLONIES
OF
ITALIAN BEES

FOR SALE.—In Langstroth hives, wired foundation frames. Very low. Also 300 of our Improved Sectional Honey-Cases used with or without separators. Circular free.

A. J. & E. HATFIELD,
13Wtf SOUTH BEND, IND.

CLOSING OUT CHEAP!

I HAVE 175 Heddon **HIVES, 150** Improved Langstroth Simplicity, **50** two-story Langstroth, and **40** Telescope hives,—Nailed up, or a part in the flat. Send for Catalogue.

J. R. LINDLEY,
15W1t GEORGETOWN, ILLS.

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—In English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO ILL.

NOW NOTE this, for it will not appear again. From special causes I shall be justified in selling and warranting Queens for 75 cts. each, the last of May and after, if you will say by May 1st how many you will order. Will sell Bees *cheap, too,* after June 5. From practical knowledge of Queens I shall not mail any that I would not use myself for profitable results. I have no Imported blood of Bees at all, but the Italians, and I warrant them purely mated. I shall need large orders at the above prices. **IRA D. ALDERMAN,**
15W1t TAYLOR'S BRIDGE, Sampson Co., N. C.

Alley's Drone and Queen Trap.

Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

READY to SHIP.—68,000 Langstroth Brood-Frames, prepared to nail, at 90 cts. per 100; $4.00 per 500. For description send to,
C. W. DAYTON,
7Dtf BRADFORD, IOWA.

SOLD!

HAVING Sold the 100 Colonies of Bees offered in the March Numbers of this JOURNAL, I am now booking orders for **Nuclei Colonies and Queens Only.** Also **Bee-Keepers' Supplies.** Send for 1886 Price-List. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
14Wtf COLERAINE, MASS.

Sections and Berry-Baskets.

WE, the *original inventors* of the one-piece sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
13W13t MILTON, Trimble Co., KY.

60 Colonies of Bees For Sale.

FOR particulars, call on or address,
A. L. EDWARDS, Skaneateles, N. Y.
13Wtf

DOWN, DOWN, DOWN!
We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
14Wtf **MAZEPPA, MINN.**

Established 1851.
BAKER & CO.
Satisfaction Guaranteed.
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
CLARK & MONROE STS.
FOOT BLOCK.
CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES.

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Dtf LIGHT STREET, Columbia Co., PA.

Prices Reduced.

THE "BOSS" ONE-PIECE

SECTIONS.

PATENTED. JUNE 28 1881

Patented June 28, 1881.

WE have **REDUCED the PRICES** on One-Piece Sections as follows :

1-lb. Sections, in lots of 500 to 4,000, $4.50
In lots of **5,000 to 10,000**, ℔ 1,000, $4.00
☞ For larger orders write for prices. ☜

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., Jan. 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

1869. UP WITH THE TIMES. 1886

Armstrong's Perfection

CROWN HIVE

The brood-frames, honey-rack, and section-boxes are all **Reversible.**

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.

Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.

1886. ITALIAN QUEENS. 1886.

FROM APRIL UNTIL OCTOBER.

UNTESTED, $1.00, per Dozen $8.00. Reared from Imported Mothers. Money refunded if not furnished promptly. Address,

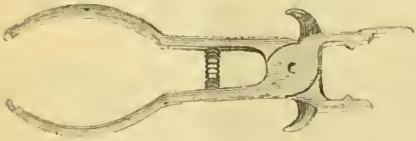
WALTER McWILLIAMS,
9D6t GRIFFIN, GEORGIA.

DUNHAM AND VANDERVORT FOUNDATION.

WE have a large stock of choice yellow beeswax, and can furnish Dunham comb foundation for brood-comb, cut to any size for 42c. per lb. Extra thin Vandervort foundation, 48c. per lb. We guarantee our foundation to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20 cts. per lb. for sections.

F. W. HOLMES,
9Dtf COOPERSVILLE, Ottawa Co., MICH.

JONES' FRAME-PLYERS.



FOR taking frames out of hives, or moving them in any way desired. It is made of galvanized iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Plyers. Price, **10** cts., by mail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies ; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.**, a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,

J. P. H. BROWN.
7D10t AUGUSTA, GEORGIA.

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REARED from Imported Mothers. Two, 3, and 4 Frame Nuclei. Safe arrival and satisfaction guaranteed. Send for price-list. Address,
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BEAUTIFUL

FOUNDATION and very choice all-in-one-piece SECTIONS, V-groove—Wholesale and Retail, and exceedingly cheap. Send for samples and Free Price-List of everything needed in the apiary.

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BEES, QUEENS,

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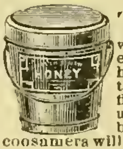

THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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Having a large stock of sections on hand we will furnish them in crates of 500 each, (less than 500, ¾ ct. each), size, 4¼x4¼x1⅞

....	$2 50
From 1,000 to 5,000—per thousand	4 50
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4½x4½, at same prices. All V-grooved.

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices.

For description and prices of the **SUCCESS HIVE**, send for Price-List. Estimates given on all other Hives.

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RAYS OF LIGHT, the original Bee and Poultry Journal. Published in the interest of Bee-Keeping and Poultry Raising. J. J. MARTIN & CO., Publishers, North Manchester, Ind. Sample copy FREE. Subscription price **50 cents** *per year.* 11D8t

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MANUFACTURERS of the **BRISTOL Bee-Hive**, the Standard Hive of Vermont, **Section Honey-Boxes**, all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers**, Shipping **Crates**, Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for illustrated Catalogue and Price-List. 46D12t

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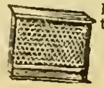

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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

LARGE SALES—SMALL PROFITS.

THE 3rd Edition of "Handy-Book and Queen-Rearing," 300 pages, 100 illustrations, bound in cloth, by mail,

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Book and sample latest improved Drone and Queen Trap, by mail,	1 50
Book and tested queen, any race (from June to October)	2 00
Book and warranted queen, ditto, ditto	1 75

Money Order office at Salem, Mass. Postage stamps will do for odd change. Send for Circulars.

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FOR SALE.

Italian Queens,

	May.	Jun.	After
Untested,	$1.00	$1.00	.85
Six,		5.00	4.50
Tested,	2.50	2.00	1.50
2-fr. Nuclei—untested queen,	3 00	2.75	2.25

Also Bee-Hives, Foundation, etc. Send for Price List. **JNO. NEBEL & SON,**
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THE VICTOR HIVE

IS pronounced by competent apiarists to be the Best Hive for comb honey. It is operated on a new principle, the passage-ways being continuous through perforated zinc to the sections. Our dovetailed White Poplar Sections, with or without side passages, cannot be excelled in accuracy or smoothness. They are as nearly perfect as can be made. Sample of the new sections for 2 one-cent stamps. Catalogue on application.

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THE GIVEN PRESS stands in the **front rank** for manufacturing **FOUNDATION in Wired Frames**, as well as foundation for **SECTIONS.** Without a dissenting voice, all of our customers affirm its superiority.

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J. R. CALDWELL & CO.,
1Atf HOOPESTON, Vermillion Co., ILL.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
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TWO-POUND

SECTIONS.

Job Lot—Cheap!

WE have received a Job Lot of **25,000** One-Piece Sections with square groove, which we will close out at **$4.00** per 1,000, or $2.50 for 500. The size is : top and bottom, 6 inches; sides, 5¼ inch; width of section, 1⅞ inches—narrow tops.

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40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. **Circular Free. T. L. VonDorn,** *Omaha, Neb.* **None Better**
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FREE A book of 160 pages on **LOVE** & Courtship, sent free by the Union Pub. Co., Newark, N. J. Send 5c. for postage.
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PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
11Atf O. CLUTE, **Iowa City, Iowa.**

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. April 21, 1886. No. 16.

Could I Write, with ink unfading,
One brief code for youths and men ;
Could I show its all-pervading
Power in progress, I would pen—
Try it.

Thus it was, will be forever ;
If "to be" man has in view,
Men must live with firm endeavor
Well to think, then plan, then do ;—
Try it.

—*The Current.*

Frank Cheshire's New Book will cost $5.00 for the 2 Volumes. They are beautifully bound. Vol. I is now ready, and we are filling orders at $2.50 per Volume. The duty and expressage is so high that they cannot be sold for less. Our offer to take orders at a less price is now recalled.

Another New Bee-Paper is on our desk. It is called "*The Bee-Hive*," and is to be published bi-monthly by E. H. Cook, Andover, Conn. It contains 8 pages, and 6 numbers will make a yearly volume, and the price is 20 cents. It is nicely printed and well edited.

A Downward Tendency in the prices of bee-keepers' supplies is quite apparent in our advertising columns. The bee-keepers who read the AMERICAN BEE JOURNAL will always be sure to learn where to buy and what the market prices are. It pays to keep posted.

"Ah ! There !" Were you just writing something to send to the AMERICAN BEE JOURNAL, for publication ? If it was on "hibernation" or "reversible hives"—please put it into the fire, or send it to some other paper ! We shall publish those communications now on hand, as soon as convenient, but *cannot accept any more*, unless it be simple explanations called for by previous articles published. Give the "hibernation theory" and "reversible hives" a rest for a year or two, and write about something else !

Those Who Claim that Bees Injure Fruit, should carefully read the article on page 245, being a Report of Experiments by Mr. N. W. McLain, at the United States Apicultural Station, at Aurora, Ills., made at the Department at Washington, and published in the Official Reports of the United States Entomologist. These experiments show most conclusively that the bees never injure sound grapes, even when on the verge of starvation. Many similar experiments we have heretofore published, but this adds another proof by carefully conducted and thoroughly guarded experiments under the fostering care of the United States Government. To California grape and raisin growers, who are now prosecuting a bee-keeper there for injury said to be done to their grapes, should make a note of this and stop their jealous and foolish persecutions of bee-keepers.

The Academy of Natural Sciences, of Davenport, Iowa, has our thanks for a pamphlet on "Elephant Pipes," by the late president of that institution.

New Subscribers are being enrolled on our books very lively during the present year. In addition to all the renewals of *old* subscribers, the *new* ones will average hundreds every week since January. "Wide-awake" supply dealers are not slow to discern this, and are crowding the advertising columns of the AMERICAN BEE JOURNAL with their announcements. Where the carcass is, there will the eagles congregate," is a trite but truthful remark.

Simmins' Non-Swarming System is the title of a new English bee-book. It contains 64 pages ; is well printed and illustrated. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." Published by S. Simmins, Rottingdean, Brighton, England.

The Illustrated Graphic News of Cincinnati, O., of April 17, is a marvellous exhibition of enterprise, containing 11 pages of original illustrations, including scenes from the riot in St. Louis ; and the floods in the South. The *Graphic News* contains altogether 24 pages, including a double supplement and cover. Bill Nye and Nym Crinkle begin their contributions this week.

"Socialistic Movements in England and the United States," which opens the May number of *Frank Leslie's Popular Monthly*, is a most timely and well written article. It reviews all the ideal schemes put forward to bring about a state where all shall have equal enjoyment with the least possible labor, where there shall be no wealth, no crime. The stories by Florence Marryat, Charles L. Hildreth, W. H. Waitt, Ellinor Brooke and others, are all capital, and the other articles are full of interest.

The Prospect is Good, says Mr. C. H. Dibbern, in the *Plowman*. He gives this very sensible advice :

The prospects for the coming season are very good. It is true that the prices of honey are very low ; but what is not low ? The prospects of a good honey crop are now very encouraging. The ground has been well covered with snow, thus ensuring an abundant bloom of white clover, which is our best honey-plant ; without it, I have never known a good year for honey. After all, everything depends on the abundance of honey-producing plants, and seasonable weather.

No matter how many hives of bees we may have, or what their condition, if the blossoms fail or do not secrete honey, the bees can get nothing, and the failure should be laid to the plants and weather rather than the bees. Honey is gathered, and not made, by the bees.

All material needed should be ordered now. Hives and sections should be made up, and everything possible be done before the busy times come. Plan now just what to do, and how to do it. In the "bee-business" more than anywhere else, we must drive the business, or it will drive us.

For Spring Feeding, Mrs. Harrison, in the *Prairie Farmer*, suggests the following :

The late cold storms, no doubt, caused the death of many a colony by starvation, and a vigilant eye must be kept on all remaining, lest they follow suit. In some winters bees consume much more honey than in others, so it is difficult to tell just how much is needed. I intended to feed those with insufficient stores last fall, enough to last until the return of nectar, but fearing that some might be lacking during the past inclement weather, I laid pieces of comb honey over the cluster upon the frames. Honey is the natural food for bees, and should be given them whenever obtainable, but when this is not to be had, a substitute is to be sought. Cakes of maple sugar put over the cluster will prevent starvation, and a syrup made of sugar the consistency of thin honey, such as the bees bring from the fields, should be supplied them, in vessels filled with straw cut up fine to prevent drowning. If the syrup is too thick, the bees will get sticky, and be unable to reach the cluster until their comrades clean it off. When bees are able to fly, food of inferior quality will not injure them, which would prove fatal, when they are closely confined to the hive.

A $5 Bill paid a debt of one hundred dollars in this way : A owed B $25 ; B owed C $25 ; C owed D $25 ; and D owed A $25. They met and paid each other in full with a $5 bill, which A took from his pocket and handed to B ; B to C ; C to D ; and D to A. That left each one in debt but $20. They repeated 4 times more and A pocketed the bill ; their debts of just $100 having all been paid with it. This illustrates how a small amount of money kept in constant circulation may cancel thousands of obligations. Do not therefore "hoard up" any money. As soon as you have it on hand pay a debt with it, and thus help others to pay their debts. This is good, honest and square advice to everybody.

The 11th Annual Meeting of the Association of Nurserymen, Florists and Seedsmen will be held in the Department of Agriculture Buildings, Washington, D. C., commencing Wednesday, June 16, 1886, and continuing three days. The Association is the largest body of Horticulturists in the country. An outline programme, hotel and railroad arrangements and other information may be obtained by addressing the Secretary, D. Wilmot Scott, Galena, Ills.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Queen-Excluders.

Query, No. 239.—When hiving swarms, what kind of queen-excluders are best for preventing queens from entering supers, and how are they constructed?—Iowa.

The most perfect are probably the zinc queen-excluders as sold by supply dealers.—C. C. MILLER.

The best I have found are those made of perforated-zinc, and I have found them to answer the purpose most admirably.—J. E. POND, JR.

Perforated-zinc is good, but a cheaper one can be made by using a thin board with slots cut in it to allow the bees to pass through, but will prevent the queen and drones.—H. D. CUTTING.

In my opinion, based on some experience, the best excluder is a good, tight bee-quilt between the apartments till the queen has commenced to lay in the brood-combs, which will be in two or three days after the swarm is hived. After this the queen is not apt to go above as long as she has room below. The best queen-excluder to be used over the narrow-top frames is a plate of perforated-zinc fixed in a frame like a school-slate in its frame, and used as honey-boards are used.—G. W. DEMAREE.

I always hive swarms on full sheets of foundation, not on combs, and I need no queen-excluders to keep the queen out of the sections, even if I put them on, full of foundation, at the time of hiving. If I did, I should use either an all metal, or part metal and part wood queen-excluding honey-board.—JAMES HEDDON.

Do Queens Lay Drone Eggs?

Query, No. 240.—Does any one know that queens lay drone eggs? Or is it not the food that does the business? If with queens, why not with drones?—Pa.

It is quite evident that virgin queens lay drone eggs.—H. R. BOARDMAN.

I have many good reasons for believing that queens lay drone eggs, that would be too lengthy to give here. I also have reasons for believing that food cannot make an egg laid for a drone produce aught but a drone.—G. M. DOOLITTLE.

Everybody knows that queens lay drone eggs, and that the food has nothing to do with the sex. Drones are males, and queens and workers are females, though the workers are imperfect females.—DADANT & SON.

Because it is not Nature's way to have food perfect the female, and lack of fecundation of egg, result in male. There is no possible doubt. The same is true of wasps and ants.—A. J. COOK.

Yes. Workers are partially developed females; food and abundant room develop into a queen, what would have been a worker. There are really only two sexes in the bee-hive, male and female, the workers not being sufficiently developed to perform the maternal office.—W. Z. HUTCHINSON.

I have never seen a queen laying in drone-cells, but I have often seen one on drone-comb when there were freshly laid eggs, and her presence did not seem to be a coincidence. Food can have nothing to do with changing the sex of eggs.—G. L. TINKER.

The Most Honey and Increase, etc.

Query, No. 241.—From which colonies can the most honey and increase be obtained—those worked for comb honey or for extracted honey? At what distance from the ground should the hives set?—R. L.

1. Extracted. 2. Four to 6 inches.—C. C. MILLER.

1. Usually extracted honey. The most money and increase can be obtained from the production of comb honey. 2. I place mine about 6 inches from the ground.—JAMES HEDDON.

1. Extracted honey. 2. From 6 to 12 inches; in this locality with clean culture I prefer 6 inches.—H. D. CUTTING.

1. It would depend upon the management. If the honey is not extracted till after it is all sealed, as I believe is the proper way, and "tiering-up" is practiced in both cases, there will be but little difference as to natural increase, while the weight of honey will be in favor of extracted. 2. I prefer hives to be about 6 inches from the ground.—G. W. DEMAREE.

1. It will depend somewhat upon the locality, but as a rule from those worked for extracted honey. 2. I prefer to place my hives down on the ground, as then the bees have no trouble in finding their way into the entrance, as they sometimes do, when the hives are placed upon a high stand.—J. E. POND, JR.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages)............$1 00
" 100 colonies (220 pages)............ 1 25
" 200 colonies (420 pages)............ 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

Convention Notices.

☞ The annual meeting of the Northern Ohio Bee-Keepers' Association will be held in the New Town Hall at Wellington. O., on Friday, April 30, 1886. All are invited to come and help make the meeting both pleasant and profitable. A special invitation is extended to the ladies. The officers of the Association will be elected at this meeting.
H. R. BOARDMAN, *Sec.*

☞ The next meeting of the Linwood Bee-Keepers' Association will be held in Condit's Hall at Rock Elm, Wis., on Saturday, May 1, 1886, at 1 p.m. All interested in bee-keeping are cordially invited to attend and make this a profitable meeting.
B. J. THOMPSON, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.
B. F. CARROLL, *Sec.*

☞ The next annual meeting of the Western N. Y. and Northern Pa. Bee-Keepers' Association will be held at Randolph, N. Y., on May 4, 1886.
A. D. JACOBS, *Sec.*

☞ The DesMoines Co. Bee-Keepers' Association will meet at the Court House in Burlington, Iowa, on Tuesday, Apr. 27, 1886, at 10 a.m. Any articles sent to the President, Mr. Geo. Bischoff, at Burlington, for exhibition, will be well cared for and returned or sold, as the sender may direct. A cordial invitation is extended to all interested in bee-keeping.
JOHN NAU, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall, N. W Corner of Main and 11th Sts., (entrance on 11th St.), at Kansas City, Mo., on Apr. 29 and 30, 1886. The Cable Line can be taken from the Union Depot for 9th and Main Sts. The following essays will be read: "The Honey Market," by Clemons, Cloon & Co.; "Bee-Keeping in Iowa," by E. Kretchmer; "Best method of handling bees for comb honey," by A. A. Baldwin; "Missouri Bee-Keeping," by J. D. Pearce; "Does bee-keeping pay as a pursuit?" by Jos. Nysewander; and "Invertible Frames and Hives," by J. M. Shuck.
P. BALDWIN, *Sec.*

☞ The next meeting of the Cortland Union Bee-Keepers' Association will be held at Cortland, N. Y., on May 11, 1886, at 10 a.m.
D. F. SHATTUCK, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Central Michigan Bee-Keepers' Association will meet on May 18, 1886, with Capital Grange at their Hall in North Lansing, Mich., to hold 3 sessions, viz: Forenoon, afternoon and evening. All interested in bee-culture are invited to attend and bring articles of the apiary for exhibition. For any special information address the Secretary,
E. W. WOOD, N. Lansing, Mich.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ☉ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; O+ east; +O west; and this ♂ northeast; ⁻O northwest; O₋ southeast; and ♀ southwest of the centre of the State mentioned.

Official Report of U. S. Entomologist.

Bees vs. Fruit—Experiments.

N. W. M'LAIN.

For the purpose of testing the capacity of bees, under exceptional circumstances, to injure fruit, I built a house 16 feet long by 10 feet wide, and 8 feet high at the corners. Large doors were hung in each end, and a part of the siding on each side was adapted to be raised up on hinges. Screen doors were hung on the inside of the outer doors, and wire cloth covered the openings on the side where the siding was raised. The house is entirely bee-proof. When the sides are raised up, and the outer doors opened, the temperature and light in the house is substantially the same as outside. Along the sides of the house I built shelves upon which fruit was placed so that the rays of the sun might strike the different varieties in different stages of ripeness from green to dead ripe. Plates of ripe peaches, pears, plums, grapes, &c., were placed on the shelves; clusters of different kinds of grapes, green and ripe, sound and imperfect, and such as had been stung by insects, were suspended from the rafters and cross-ties of the house.

On September 1, I removed three colonies of bees from their hives, carefully and quickly, so that they would carry very little honey with them when transferred from one hive to another. Two of the colonies were hybrid bees, and one Italian. These colonies were hived on empty combs, and placed in the house with the fruit. A wood-stove was put in the house, and for a number of hours each day a high temperature was maintained. The physical conditions which would ordinarily prevail in nature during a protracted and severe drought were artificially produced and steadily maintained.

The bees were brought to the stages of hunger, thirst and starvation. The house was kept locked, and I carried the key.

Every inducement and opportunity was afforded the bees to satisfy their hunger and thirst by attacking the fruit exposed. They daily visited the fruit in great numbers, and labored diligently to improve the only remaining source of subsistence. They inspected and took what advantage they could of every opening at the stem or crack in the epidermis or puncture made by insects which deposit their eggs in the skin of grapes. They regarded the epidermis of the peaches, pears, plums and other fruits having a thick covering, simply as subjects for inquiry and investigation, and not objects for attack. If the skin be broken or removed they will, in case of need, lap and suck the juices exposed. The same was also true of the grapes if the skin was broken by violence or burst on account of the fruit becoming overripe; the bees lapped and sucked the juices from the exposed parts of grapes and stored it in the cells for food. They made no attempt to grasp the cuticle of grapes with their mandibles or with their claws. If the grapes were cut open or burst from overripeness the bees would lap and suck the juice from the exposed segments of the grape until they came to the film separating the exposed and broken segments from the unbroken segments. Through and beyond the film separating the segments they appear to be unable to penetrate. I removed the outer skin from many grapes of different kinds, taking care not to rupture the film surrounding the pulp. When these were exposed to the bees they continued to lap and suck the juices from the outer film until it was dry and smooth as was the film between broken and unbroken segments. They showed no disposition to use their jaws or claws, and the outer film as well as the film between broken segments remained whole until the pulp decayed and dried up.

After continuing the test for thirty days, using such varieties of fruit as could be obtained, I sent to Michigan for varieties not obtainable here. Through the kindness and favor of the president of the Michigan Horticultural Society, Mr. T. T. Lyon, of South Haven, Mich., I secured twenty varieties of grapes, which arrived in excellent condition. Another colony of Italian bees was then placed in the house with those already confined for forty days, and the twenty varieties of grapes were exposed upon plates and suspended from the rafters as before. The conditions naturally prevalent during a severe and protracted drought were again produced, and the test again continued for twenty-five days. The result was simply a repetition of the former test. The bees showed no more capacity or disposition to offer violence to one variety of grapes than another. No more attention was given the thin-skinned varieties than the thick-skinned. As long as the skin remained whole they did not harm the grapes. When the skins were broken by violence, such as by cutting or squeezing, the juices exposed were appropriated. The extent of damage the bees could do to grapes burst from overripeness depended on the extent of the rupture in the film surrounding the pulp. A wide rupture may be made in the epidermis, or it may be removed, and if the film is unbroken the pulp remained whole. The film seldom bursts until the grape is about to decay, or has begun to decay, and then the grape is of little value.

In order to determine the size of the opening necessary to be made in order that bees might injure grapes, I punctured the cuticle of the grapes in several bunches with cambric needles of various sizes. The puncture made with the point of medium-sized needles produced no effect. Neither does the puncture made by the sting of insects, when ovipositing, until the blister appears and decay progresses with the development of insect larvæ. I found that I might pass a medium sized needle through a grape, from side to side, and bees could obtain no juice except that oozing from the puncture. Many erroneously suppose that bees sting the grapes. Bees never sting except in self-defense or in defense of their homes from real or imaginary danger.

At times when bees could gather nothing in the fields I saturated clusters of grapes with honey and suspended them in front of the hives in the apiary, and from branches of trees and grape-vines near by. Other clusters dipped in honey and syrup were hung in the house. The bees thronged upon the grapes until the clusters looked like little swarms hanging to the vines and limbs. They lapped the grapes until the skins were polished perfectly smooth and shining like the inside skin of an onion, and no taste of sweet could be detected by touching the tongue to the grape. The skins of the grapes were left intact.

Bees, like some animals of a higher order, seem to enjoy stolen sweets better than any other. Taking advantage of their propensity to steal and despoil, I placed combs containing honey in an unoccupied hive and permitted the bees in the apiary to steal the honey and such portions of the comb as they could appropriate. I then suspended instead of the despoiled combs clusters of grapes dipped in honey. The bees attacked with desperate earnestness, apparently determined to literally go through those grapes. The clusters were left hanging for a day or two, until the bees had entirely deserted the hive, and examination showed the grapes to be as sound as when placed there, and the skins polished smooth and clean as before.

I then punctured the grapes of several clusters by passing a darning-needle through the berries from side to side, and hung them in the house near the hungry bees. They sucked the juices from the broken segments as far as they could insert their tongues into the wound, leaving a depression near the puncture, and the remainder of the pulp was left whole.

The instinct of bees impels them to remove everything useless or strange from their hive. They will labor harder to remove any object which is useless or offensive than for any other purpose. After passing a darning-needle through some of the grapes in several clusters of different varieties, I suspended these clusters from the top of comb frames by using fine wire and placed them in the center of strong colonies of both hybrids and Italians. The juice was extracted from the punctured segments as before, and the perfect grapes hung undisturbed for fifteen days. They appeared to have kept better hanging in the hive than they would have kept on the vines.

The evidence then shows that bees do not injure perfect fruit. I have observed that they give no attention to the puncture and blight caused by the ovipositing of other insects, until after the larvæ is hatched and decay has set in, and then only in cases of extremity. The circumstances under which bees appear to be able to injure grapes are very exceptional. That they will not molest or even visit grapes when it is possible to secure forage elsewhere is certain. It also appears certain that they never attempt violence to the skin of grapes. The capacity of bees to injure overripe grapes is limited by the extent to which the juice and pulp are exposed by the bursting of the film. If the film is only slightly burst the bees can do but little injury. If the progress of decay has caused a wide rupture in the film the bees more readily appropriate the juice. If overripeness and decay have exposed the pulp of grapes to such an extent that bees can damage them seriously, the bees should be confined to the hive (unless the weather be excessively hot), and the grapes should at once be gathered, for from this stage the progress of decay is rapid. Confinement to the hive for a short time, while the overripe grapes are being gathered, would result in no loss and the bees would be prevented from gathering the grape-juice and storing it in the hive. Bees confined to their hives in warm weather must always have ample top ventilation, and should be liberated and allowed to fly half an hour before sunset each day during the term of their confinement. The excessive use of grape juice often produces inebriety. In the case of the bees it produces diarrhea. After grapes have arrived at the stage of overripeness and decay in which it is possible for bees to injure them, and the circumstances are so exceptional as to cause the bees to seek such food, it would be advantageous to the grape-grower to secure his grapes from the ravages of decay, and advantageous to the bee-keeper to secure his bees from the ravages of disease.

The following named varieties of grapes were used in making these tests: The Niagara, Delaware, Roger's No. 10, Roger's No. 14, Roger's No. 15, Roger's No. —, Taylor, Ives, Lady, Hartford, Martha, Concord, Northern Muscadine, Vergennes, Brighton, Pocklington, Worden, Isabella, Diana, and Syrians from California, and three other varieties the names of which I did not learn.

Mr. Richard Rees, a florist and horticulturist of many years' experience in the Eastern and Western States, informs me that he has very carefully observed the effect of bees upon flowers and fruits in the orchard, garden, and greenhouse. He regards their presence as wholly desirable and altogether beneficial. During a term of four years he had charge of a large conservatory and garden in this city. At times he had as many as fourteen different varieties of exotic grapes in bearing in the conservatory, and from 2 to 3 tons of ripe grapes hanging on the vines at once. A large apiary was located near by, and late in the fall and early in spring the flowers and fruits in the conservatory were visited by the bees in great numbers. The grapes were unmolested, and the bees aided in fertilizing the flowers. He says that he has had large experience in grape-growing in vineyards, and that he has never known any damage or loss resulting from bees, and that when grapes are burst from overripeness, or decayed and blighted by the hatching of insect larvæ, to such an extent that bees can appropriate their juices, they are of little, if any, value. He has never kept any bees, but he regards them as being of great service to floriculturists and horticulturists on account of the service rendered in fertilizing blossoms.

U.S. Apicultural Sta., Aurora, ♁ Ill.

For the American Bee Journal.

"Kindly Criticism."

WM. F. CLARKE.

Mr. J. E. Pond, Jr., has an article in the last issue of the *Bee-keeper's Guide* on the new Heddon hive, which he prefaces with a plea for free discussion, in the course of which he complains that bee-keepers are apt to regard adverse criticism as being actuated by a wish to injure the person or object criticized. This he disclaims, and avers that the opinions he is about to express, though adverse to the new hive, are of the nature of "kindly criticism." He concludes the article by saying that he has written "with malice toward none, and justice toward all."

In the course of his remarks Mr. Pond says of the new hive: "Mr. Heddon is very enthusiastic in regard to it; 'my friend' deems it the greatest output of the age; 'Bro. Clarke' sounds its praises with a big blast of his 'ministerial trumpet.'" I beg to ask if this reference to myself can be fairly called "kindly criticism," and if it is entirely harmonious with the principle of "justice to all." I go farther, and inquire if it is in strict harmony with truth? For in what sense have I sounded a "ministerial trumpet" in praise of the new Heddon hive? Did I quote Scripture in support of its claims? Did I bring any religious arguments to bear in its favor? As a *literateur*, I am somewhat versatile. I write on agriculture, apiculture, and even on politics as well as religion. It was well said once by a member of the military profession that the worst thing about the army was that *a soldier cannot be a man*. The same is true about the ministerial calling. No one is better aware than Mr. Pond that when I write on general topics, I write as a *man*, and he would be one of the first to object if I claimed that any special weight attached to my utterances because I am a minister. Does Mr. Pond sound the trumpet of a lawyer when he discusses bee-keeping? Only when he deals with patent rights. Then he manages to advertise his extensive knowledge and large experience as a patent lawyer.

It may be asked why not send this *critique* on Mr. Pond to the *Bee-keeper's Guide*? "Thereon hangs a tale," which is a pat illustration of the heading to this article. The March number of the bee-periodical just named contained an editorial paragraph, part of which reads as follows:

"It appears that James Heddon has organized a band. He is to play first fiddle, W. Z. Hutchinson, the second fiddle, while Rev. Clarke is to blow the horn. Prof. Cook is learning to play in hopes of getting in. The necessity of this band is to operate a new hive, etc., etc." I wrote the editor complaining of the injustice done to myself and the other gentlemen mentioned, by this style of remark. No notice of this communication is taken in the April number, nor has it been even acknowledged by private letter. The idea of my being hired as a member of the Heddon band to "blow the horn," seems to have struck Mr. Pond's fancy. Hence he produces it second-hand by speaking of my sounding "a big blast" with the "ministerial trumpet."

The phrase "kindly criticism" reads well, but there is an old proverb which suggests that we should be *just* before we are *generous*, and another which truly declares that "consistency is a jewel." It is "the unkindest cut of all" to say or to insinuate that what a man writes with protestations of honesty and impartiality is prompted by self-interest, or part of the set policy of a ring or clique banded together "to operate a new hive." If you consider me in error, say so freely and manfully; produce your strong reasons in support of the statement, and I shall think the better of you for so doing. But unjust reflections are not changed in character by calling them "kindly criticism," any more than a jar of glucose compound is redeemed by labelling it "pure honey."

Guelph, Ontario.

For the American Bee Journal.

Mr. Frank Cheshire's New Book.

DR. C. C. MILLER.

"Bees and Bee-Keeping; Scientific and Practical. A Complete Treatise on the Anatomy, Physiology, Floral Relations, and Profitable Management of the Hive Bee. By Frank R. Cheshire, F. L. S., F. R. M. S." This is the title in full of the book which has been in course of publication in parts, in London, by L. Upcott Gill, 170 Strand, W. C. Volume I, the Scientific part, is now complete. It is beautifully bound in cloth, and contains 336 pages. Paper and print are both excellent, but on turning over the leaves, that which most excites attention is the large number of illustrations. There are eight full page plates, beside 71 figures scattered throughout the book. No one is likely to imagine the exquisite delicacy of these illustrations without seeing them. They are, for the most part, to show the anatomy of different parts of the bee magnified 5 to 400 times. Mr. Cheshire gives in these pages the result of much painstaking labor as a microscopist. But ninety-nine out of every hundred bee-keepers will, like myself, find much beyond the range of their easy comprehension, and yet I think there will arise some desire to know more of it.

One cannot help a feeling of regret that such beautiful pages should be marred by the unkindly spirit shown toward Prof. Cook. Surely, the interests of science do not demand the least resemblance of any thing like an exhibition of personal dislike.

After speaking of the position of the hive-bee in the animal world, and giving its classification in the first chapter, the second chapter gives the economy of the hive-bee, including development from the egg, larva and pupa. Speaking of this development the author says (page 24) "in something more than 12 days from the time of sealing, the transformations are complete." Has this been verified by others? On the same page, speaking of the just-hatching bee, he says, it "bites at the door of its prison-house, into which it soon carves a long, curved slit....and then, by a push, it makes way for its emergency, the head is advanced as at N, and a pale but perfect bee walks into view." In the many cases which have come under my observation, it is not a simple cutting a slit then a single push and out it comes, but after cutting a slit the bee gives a push, finds more room needed, cuts again, then pushes again, and this may be repeated several times before the bee emerges. It may be said I am engaged in hair splitting, and in an ordinary work I should not notice this, but Mr. Cheshire is very severe upon others who are not strictly accurate in matters apparently more difficult of exact observation than this.

Chapter III treats of general structure, and Chapter IV of the nerve system. After speaking of the brain as showing intelligence superior to other insects, he says, "As we proceed, I shall have more than once to point out a misconception, which would appear to be all but universal amongst bee-keepers, and to show that the queen is not superior to, but greatly the inferior of the worker; and the brain bears evidence to this position, as that of the queen is relatively small, as is also that of the drone."

Chapter V treats of the digestive system, and Chapter VI of glands.

Chapter VII tells about the tongue and mouth parts, the wonderful mechanism by which "the bee is equipped to take advantage of all sources of supply. She can gulp down big draughts, or sip a stream of nectar so fine that 600 miles of it will, when evaporated, store but a 1-pound section-box."

The next chapter treats of the antennæ, the organs of touch, smelling and hearing. Think of 37,800 distinct organs in two antennæ of the drone! This chapter treats also of the eye with its thousands of facets.

The thorax and legs form the subject of Chapter IX. Since reading this book I think I can never again look upon a bee climbing a smooth surface without a feeling of profound admiration. Imagine that a person is trying to climb a wall by means of his finger nails, and that whenever the wall becomes so smooth that the nails lose their hold, the resulting closing of the fingers causing the instantaneous pressing of the flat of the knuckle against the wall, the knuckles being furnished with a substance so adhesive as to sustain the weight, and you have in a very clumsy way the idea which Mr. Cheshire so clearly brings out by the aid of his illustrations.

Chapter X has for its subject wings and flight, buzzing and humming. Four hundred and forty is given as the number of vibrations of the wings per second. The beat of the wings makes the buzzing, but the humming is a true voice.

In Chapter XI (secretion of wax, and bee architecture), we are told that in a square inch on one side of a comb there are 28 13-15 worker-cells, and 18 178-375 drone-cells.

Here, surely, is heresy, for every one knows that worker-cells measure 5 to the inch and 5x5=25. A moment's thought, however, will show that 25 is correct only on the supposition that the cell is a square, and a little figuring upon the surface of the hexagon will show 28 13-15 correct to within one-thousandth. The only wonder, after one's attention is called to it, is that so palpable an error should have passed unchallenged so long. As it makes the difference of 1,114 cells in a square foot of comb it is a matter of some consequence. The sealing of honey-cells is described as not absolutely impervious to air, although the author himself speaks of it in a former chapter (page 18) as air-tight.

The structure of the sting and its action is minutely described in Chapter XII, and the organs of the drone and queen in the next two chapters. The ground is taken that the queen never mates the second time, that drones reared from drone laying queens are fully virile, and that dwarf drones reared in worker-cells are probably virile, and that drones have no other use than to fertilize queens. Two interesting chapters, one on bees and flowers mutually complementary, and one on bees as fertilizers, florists, and fruit producers, close the volume.

I would give many times the price of this book to have its contents clearly in my head. Suppose there is nothing of direct practical value (and it may be of more practical value than I suspect), a full understanding of the wonderful mechanism of the different parts of the bee, and the beautiful adaptation of means to ends, gives one a thrill of delight that cannot but cause a greater enjoyment in his daily intercourse with these tiny creatures. Although not well posted in such matters, I have no idea that there is in the English language (or indeed in any language) anything approaching this volume in fullness of information and completeness of detail as to the subjects of which it treats.

Marengo, ♁ Ills.

For the American Bee Journal.

Honey for Bees in Winter.

J. E. POND, JR.

Mr. Heddon says: "I no longer doubt that practical success in wintering depends upon proper food and temperature." Why he should ever have had such doubts is a mystery, as the proposition, so far as it goes, has been a well established axiom for years. Under right conditions any colony will winter safely, is another axiom, and both of these propositions are of one and the same effect, the first being the lesser, and that contained in the last the greater.

What are right conditions? is the real question at issue: in other words, what combination of circumstances and things is necessary to produce the desired result? Winter losses do occur with all kinds of food, and in all temperatures; this is a significant fact, and shows conclusively that the conditions are not right; that something is lacking. As yet we have no really satisfactory proofs that sugar is a safer winter food than pure honey; and we have the strongest possible evidence that with other conditions right, pure honey is absolutely safe; and we have not as yet such proofs in regard to sugar. This being the case, and I have ventured the assertion on historical grounds solely, we have a strong argument against the use of sugar as winter food for bees when pure honey can be obtained. I will say nothing now in regard to honey being a natural food, as the argument is strong enough without such aid, but will confine myself to established proofs rather than to theoretical notions.

The idea of adulteration obtains to a large extent in regard to honey; that this is so will not be denied; the glucose idea did prevail, but now the fact that sugar is being extensively recommended and used as food for bees has great weight with would-be consumers, and they do not become consumers simply from fear they will not get pure honey. It is not at all strange that the general public do not understand the matter. Why should they? They simply know that *honey* is, or ought to be, the product of the bees; they have been told by the "Cottons" and others, that bees will store sugar the same as they do honey, and when they find bee-keepers feeding sugar, it is difficult—I might say impossible—to convince them that it is not so fed to be stored and sold as or for honey.

The above is a natural and a logical conclusion, and as such, is to the consumer a fact that will admit of no denial. The remedy is with us. We must learn what right conditions for wintering consist of and in; then we will use pure honey as bee-food, and show the world both by precept and example that our honey is purely gathered nectar, and that it cannot possibly contain any adulterants.

Foxboro,○+ Mass.

For the American Bee Journal.

Care in Making Progress.

REV. L. JOHNSON.

Much harm has been committed in the past among bee-keepers by a too rapid reception of new things, and unless great care is taken a like evil may result from the injudicious use of new things now coming forward. Before using anything we should know for what it is designed, and then how best to attain that end in view.

The new reversible hive may be a a good thing, and in the hands of those who understand bee-culture and have clearly defined ideas of what it is intended for, may accomplish good results. But may there not be some danger of many persons without proper knowledge or experience, taking hold of it and after much expense and trouble, having the sad report to make that they have been humbugged? Yet this may not be the fault of the hive, but entirely for want of proper handling.

To illustrate: Some ten years ago a great deal was said in many sections of the country about "Dividing," "Artificial Swarming," etc., and one enthusiast on the subject went so far as to state that as many as 32 colonies could be made from one in a single season. As a result, many persons without proper knowledge began to rapidly divide their colonies, and divided them to death. One old gentleman with whom I was acquainted, was given 4 colonies in box-hives in the spring of 1876. He got a friend to transfer them for him; when he began dividing and by the first of August he had 21. The next spring he had 21 empty hives—the only bees lost in the neighborhood that winter.

When the honey extractor first came into use, many persons who knew nothing of honey in an unripened state, purchased one, and began throwing out the stores of the same colonies every 3 days. The result was that a lot of unripe, sour honey was placed upon the market, which was utterly unfit for anything. An injury was done to extracted honey that it will take years to overcome. The same mistakes have been made in comb foundation, and introducing the new races of bees. Especially is this true in regard to handling the Cyprian bees. In the hands of those who understand them, I have no doubt they are an acquisition, but so many have taken hold of them without proper knowledge, that their reputation is ruined forever. All of us who have given apiculture much attention for any number of years can call to mind other instances where some actual benefit to our craft has been much injured by its too rapid introduction.

The reversible hive has only been tried by its inventor and one or two others for two seasons. These men are practical apiarists; and in their hands it has done well; but when others with less knowledge and without properly understanding what is intended by this hive, undertake its use, it may receive a backset from which it may not recover in years.

I am in favor of making every progressive step in bee-keeping that is possible; but so much enthusiasm often ushers in a new thing as to do it harm. I would urge bee-keepers to carefully ponder before doing away with the old, tried and profitable standard hives which we now have, and adopting something we do not yet understand. Take hold cautiously, and let those who have time and money with which to experiment, enjoy the benefits for a time. Better lose a little, than through haste and ignorance permanently injure a good thing.

Walton♁ Ky.

For the American Bee Journal.

Feeding Sugar—The Weather.

JOSHUA BULL.

I have read with much satisfaction the caution that was given on page 195, about feeding sugar to bees; also other articles which have appeared in the BEE JOURNAL upon the same subject. I am heartily glad that this matter is being considered in its true character in relation to the effect it has upon the honey market. Whatever the motive may be on the part of those who feed it, the fact that sugar is fed to the bees has created a suspicion of fraud in the minds of consumers, which has, no doubt, very materially affected the market, by curtailing the demand for honey, through a want of confidence on the part of purchasers as to the purity of the article; and I can see no better way to allay such suspicion, and restore confidence between producer and consumer, than to discontinue the practice of feeding sugar altogether.

We have had a long winter up here in Wisconsin, most of the time quite mild for this latitude, although we had some extremely cold weather. On the morning of Feb. 3, the mercury made a plunge down to 40° below zero; on March 17 we had sharp lightning with heavy thunder and rain. During the first week in April the mercury was down to zero four times. It almost makes one nervous to read in the BEE JOURNAL about bees gathering pollen, drones flying, etc., in other localities, whilst with us the air is chilled and vegetation held in check by large banks of snow and ice, which, however, are now rapidly disappearing.

So far as I have learned, bees that were in good condition last fall, have wintered well in this vicinity; yet considerable losses have occurred where conditions were not right. We are hoping for a good and prosperous season.

This afternoon the clouds have broken away, the sun shines down brightly and warm—mercury up to 58° in northern shade—and the bees are having a great jubilee.

Now winter may go,
With its ice and its snow,
Without any further delay;
For summer is coming,
The bees are out humming,
And the apiarist's heart is gay.

Seymour,○+ Wis., April 12, 1886.

For the American Bee Journal.

Rearing and Introducing Queens.

S. J. YOUNGMAN.

I desire to fully describe what I consider the best manner for rearing queens for home use, and their successful introduction to nuclei prepared for their reception in anticipation of their hatching.

I think it can be said, and with well-founded reasons, that some of the best methods and essential details of queen-rearing have been kept in the back-ground by queen-breeders who are rearing queens for the market, and who have selfishly been the means of materially hindering the progression of that noble art—bee-keeping. In this climate queens may be reared, nuclei formed, and queens fertilized, earlier than natural swarming can be expected to occur. The first essential to successful or early queen-rearing is, of course, in strong, vigorous, well-wintered colonies. Queens are more easily reared by Cyprian, Syrian, or hybrid bees than by pure Italians, and should be given the preference for such work. If the apiarist has any of the new races in his yard, I would also say that queens, particularly the Syrians, are more hardy and strong upon emerging from the cell than are those of the Italians. I have repeatedly seen them take wing when first escaping from the cell, and disappear, but return again in a short time.

Of course every bee-keeper will have some colony in his yard that he prefers to the others, and may wish to breed from this exclusively, which is advisable, and easily done. The first step is to take out one of the central frames of the brood-nest and replace it with one selected that is not over one year old, and one that brood has not been reared in more than once. This comb will usually contain eggs at the end of 24 hours, which may be used at once; but when the eggs are used the average apiarist will usually meet with failure, consequently I would recommend that the eggs remain until they hatch and first reach the larval state. Queens reared from the young larvæ are fully as good as those reared from the eggs.

The colony that is to do the work should now be deprived of its queen, which may be removed with the best frame of brood and adhering bees to another hive in a distant part of the yard, and quickly be built up to a strong colony by the aid of old combs or frames filled with foundation. I usually remove the queen in the evening, and the next morning all the brood may be removed and distributed among other colonies. From 40 to 48 hours after the removal of the queen, a colony is in readiness to receive the eggs or larvæ from which the queens are to be reared.

Now, to prepare the eggs or larvæ ready for the bees: Take a frame of comb (½ or ⅔ full is as good as any, or if it is all or part *drone comb* it will answer as well); heat a thin case-knife and cut this comb so that it will be about 4 inches from the lower side of the top-bar to the lower side of the comb, forming a semi-circle; the comb will be the shape of a crescent or half-moon, being about 4 inches deep in the middle. Being ready for the larvæ they are now removed from the hive of the favorite colony, and taken immediately to a warm place. I proceed to cut strips from a part where I am able to get cells in rows from 3 to 6 inches long. I leave one row of cells intact, but cut each row of cells at each side through the middle. One side of this strip should now be cut off with the aid of the hot knife, leaving the cells not over ¼ of an inch in depth. The larvæ should now be removed or destroyed in every other cell, not leaving anything. The bees may utilize, in rearing a queen, any room except in the straight row of cells, and there only in every alternate one. Enough of these strips should be prepared to form a row on the under side of the crescent-shaped comb, which may be made to adhere by dipping the side which has the long cells, into a mixture of beeswax and resin—two parts wax and one of resin, heated quite hot in a small, square, shallow dish made of tin or sheet-iron.

The reason for having the comb in the shape of a half-circle, is so that the bees may have plenty of room on all sides of the cells, and give room to pass a sharp knife between the cells without destroying or injuring any of the cells. Under the old way several cells would sometimes be built together so that it would be impossible to remove and separate them without destroying some of them.

The colony is now in condition to put all its energies to cell-building, and will do so as they have no brood to attend to. Their whole attention will be given to the cells, and but a very little honey will be gathered. The prudent bee-keeper will therefore see that they are well supplied with food, and if they should be uneasy and many bees die, some capped drone brood may be given them to advantage; in fact, I think it will be beneficial from the start. The queens will hatch on the 16th day from the day the egg was deposited in the cell. I usually remove them on the 14th day, as all they need after that until they hatch, is the necessary warmth, although the bees will help remove the young queen when she sometimes would not be able to emerge from the cell by her own efforts.

It will be found that the new races of bees, with this method, will average one dozen good cells, and whatever bees are used it will be found that more cells will be built, and they will be larger, contain more of the royal jelly, and that the queens will be larger and more beautiful than when reared under the so-called swarming impulse.

The two most important matters in increase of colonies is to keep the colonies *strong* in bees; a prolific queen is also very important; second, to guard against the chilling and loss of the brood in the newly-formnd nuclei, by a change of temperature or the lack of the requisite number of bees to properly protect the brood from chilling. The cells, if left too long, must be carefully watched, for, as soon as the first queen is hatched, the bees will quickly destroy the remaining cells by biting into them and removing the young queens. I proceed to form the nuclei the evening before I wish to remove the cells, by first taking a frame containing the greatest number of hatching bees, and putting one frame only in a hive, and between two empty combs. If there are not enough adhering bees upon the comb of brood, bees to the amount of from one-half to one pound may be shaken into the hive, according to the weather, being careful in all cases not to get the queen in. The bees should be shut in until morning before being liberated. Some small boards should be set up in front of the hive, so that the bees may mark their new location and not return to the old hive.

Remove all the queen-cells from the hive. The cells may be separated by using the warm knife, leaving a small piece of comb attached to each. To introduce them, all you need to do is to spread one end of the combs in the nucleus, and place the cell in between the bars in such a position that nothing will prevent the queen from emerging from the lower end of the cell. If the queens have hatched on your hands, and you have been fortunate to have saved them, all you need to do is to simply let one run in at the entrance of the hive. The bees will not harm or molest her in the least. No more bees need be added, but after the queen shall have hatched, and the most of the brood also, select another frame of the oldest brood that may be found, and place it in the centre of the nucleus which will serve to add strength to the immature colony, and if for any reason the queen has not hatched or has been lost, you may soon know it, as queen-cells will soon be started if the frame contains any uncapped brood, which is an easier and surer test of queenlessness than not finding the queen.

Some of the advantages of this method of increase will plainly be seen; first, the bees do not waste any of their energies in the wrong direction, but are obliged to work on such eggs or larvæ as are given them; the queens are reared in strong colonies, and I think are superior to queens hatched in the natural way. The bee-keeper need not be without queens, as any one surely will be if they depend upon the bees to rear them under the swarming impulse. I have known a colony of pure Italians to build but one queen-cell, and then it was of such thickness and solidity that the queen could not hatch. I have also known bees to swarm and not leave anything nearer a queen than newly-laid eggs, and without any queen-cells whatever.

This is also the safest manner of introducing queens, for but very few of the nuclei will fail to have a queen. Some may be lost on taking their bridal trip, if the hives are not placed in proper position, and the right distance apart. It will also be seen that it takes but few bees to start a nucleus, as we depend almost entirely upon brood to form them, and brood may be taken every week from a strong colony and not perceptibly weaken it if done judiciously, if the queens are prolific, and none others should be allowed in the apiary of a modern and progressive bee-keeper.

Cato,⊙ Mich.

For the American Bee Journal.

Bees in a Greenhouse in Winter.

J. A. BALMER.

On Nov. 14, 1885, I was offered a colony of bees. Their owner intended to brimstone them to get the honey, (about 5 lbs). They were in a box-hive, and as the man wanted to save his hive, I undertook to drive the bees. The day was cold, but not freezing. I turned the "gum" upside down and commenced knocking the hive and smoking them, but they would not drive, so I cut out the combs, brushed the bees into a sieve, and brought them home.

I had placed my own bees, that same day, in a sawdust-packed house, and did not care to disturb them; therefore I had to hive these few bees on 3 frames of drawn-out foundation, without a particle of honey or bee-bread in them. I placed them in a greenhouse 12x50 feet. The bees were very numb from cold, but soon recovered under the influence of the greenhouse temperature.

I made them some nice, thick, warm feed, using granulated sugar and water just brought to a boil; to this I added a pinch of tartaric acid. They took the feed readily, and soon made preparations for extending the comb. They flew well every day, and did not struggle much to get out of their confinement; though a few would be lost every day. The point of interest in these bees lies in the fact that they were badly affected with diarrhea from the first day they were put into the greenhouse, and this without pollen. There were a few flowers in the greenhouse, but very few pollen-yielding ones. After they had been in-doors 5 days, there came a warm spell of weather, and I placed them in a sheltered position out-doors; they flew well, but still specked their hive.

While out-doors I made an examination of the hive, and found the queen laying freely, but of course no larvæ, as there was no bee-bread in the hive. Soon the weather changed and I again moved them in-doors. I kept them two weeks on pure sugar syrup, during which time they drew out and capped three sheets of foundation. And I never saw bees with the diarrhea as bad as they had it.

As I pack my bees without removing any frames, I had no bee-bread or honey to give them; so I went to a neighbor bee-man and got two frames well filled with bee-bread and some honey; one of these I placed in the hive, the other I hung up in the house, and uncapped a little of the honey. Soon the bees were working on the suspended frame, and eventually they removed every particle of honey and bee-bread from it. They were now rearing young bees pretty well, and had a few inches of capped brood. Many of the bees had wax scales sticking to their bodies. They still had the diarrhea very badly, and many bees were dying daily; they would settle on a leaf and gradually stiffen and die.

The temperature of the house ranged from 55° to 65° at night, to 70° or 80° during the day.

This I think is not in accordance with the conclusions arrived at by correspondents of the BEE JOURNAL early last year while discussing the pollen theory. They agreed that cold, and cold alone, was the prime cause of diarrhea among bees. It certainly was not cold in this case, for the temperature was never below 55°, Fahr.

They used the two frames of bee-bread very quickly, in fact so quickly as to lead me to believe that not one-half of it was used for feeding young bees. By Jan. 1st, the supply of bee-bread run out, and bee-rearing stopped; their supplies were now all capped and I then thought that the diarrhea was ended, for they had no pollen; but not so, however, for the same dirty splatches continued to be found on the white-painted sash-bars.

I kept them three weeks without bee-bread, but there was no improvement in their diarrhetic condition. Their number was fast being reduced, so I gave them some flour, and placed a frame of capped stores from their own hive in front of the hive. They then commenced to rear young bees.

My object in placing the frame of honey outside the hive, was to keep them carrying in, and see what they were able to do. On Feb. 1 the queen was laying freely, yet not one-third of her eggs were hatched; the bees, no doubt, ate them.

What was the cause of the incessant diarrhea? It could not have been the cold; and I do not think that eating the eggs would affect their health. Could it have been the excessive moisture in the greenhouse? Most of the bees up to Feb. 1 had been reared since Dec. 1; therefore they knew no other pasture than the greenhouse afforded; and not 5 per cent were lost on the glass by struggling to get out.

I have learned one lesson from these bees that is not recorded in the text-books, namely, that old bees can produce wax at will, and that without the aid of pollen or bee-bread. I would like to have some of the experienced apiarists give their opinions on the above case.

Paris,⊶ Ills.

For the American Bee Journal.

The Wintering Problem.

S. BITTENBENDER.

This problem seems to be the most important thing to be mastered by the apiarists of to-day. This problem once mastered means one-third less cost in the production of honey. More has been written upon this branch of our growing industry than upon any other. Hundreds of theories have been anvanced through the bee-periodicals, yet all have been found by experience to be only theories.

The hibernation theory, as advanced by Rev. W. F. Clarke, appeared plausible at first, but it is not a solution of the problem at all. Bees in a normal condition in winter have a quiet state of repose, but do not hibernate as some other insects do. My reasons for so believing are: 1. Strong colonies are perfectly quiet, (or hibernating?) in January and February while they are breeding and consuming honey, either in the cellar or out-of-doors. Can bees hibernate while breeding and consuming honey? 2. I care not what temperature the air outside of the hive is (when the hive is in the cellar or on the summer stands.) strong colonies are all the time humming? Can bees hibernate while humming? 3. The ants, while in the state of hibernation, are apparently frozen as hard as ice; pick them up and they will be found as motionless as a stone; here is true hibernation. Bees in this state will not live 48 hours, although I have known them to become seemingly dead for 12 hours (from cold) and yet survive when placed near a fire.

How may we winter our bees on their own combs with natural stores? Here is my theory, which you may call the "October theory" or whatever you please:

There is a law in all nature which requires living things to take periods of repose. Man and the higher orders of creation require a daily repose at night, while most insects, trees, and flowers, require a yearly repose. Violate these laws and you must suffer. Nature provides for all things. She bids our "pets" to discontinue breeding from Oct. 1, to midwinter. Common sense would teach us to suppose that this was the natural time for bees to hibernate or repose. Bees in their natural state in the woods keep themselves in the trunks of trees 4 to 6 inches thick, where the autumnal sun cannot disturb them in their October and November repose. We thwart nature's ways when we put our bees into a ⅞-inch hive and let the sun beat upon it till cold weather comes, disturbing the bee in its natural repose. Bees should be put into the cellar, or packed on their summer stands, as soon as they stop breeding; if they are packed it should be so effectually done that the warmth of the October and November sun cannot allure them out of their hives. Bees contract their well-known complaint in October and November as follows:

During the first cool weather in October, breeding having ceased, they fill themselves with honey preparatory for their natural repose, but in a few days they are disturbed by the warmth of the October sun. They take a flight. The apiarist is happy. The bees unload themselves. I have known them to spot the ground considerably after a cold spell in the fall. The cool October nights cause them to fill themselves with honey again for nature's repose, but another warm day thwarts nature's plans once more. Things continue thus until a temperature of 10° in December persuades the bee-keeper to carry them into the cellar or pack them on their summer stands, "according to scientific principles."

Now in what condition do we find the bees? 1. They are weakened by the loss of their natural repose the same as their owner would be were his quiet sleep to be disturbed every night for the half year. 2. They have already the germ of diarrhea within them. Their intestines are in an abnormal condition, being unnaturally exercised, and weakened by inflammation. 3. They have acquired an unnatural appetite for eating honey. They eat too much, and now being deprived of their natural flights, soon become distended beyond endurance, and with their intestines inflamed, they must have a flight every few weeks or perish. Is it any wonder that we lose our bees when we thus treat the laws of nature? Why do bees cease breeding October 1, if nature does not bid them repose at that time? It is not because they gather no honey, for in February and March they will breed without collecting honey.

In support of the theory of early reposing, I would remind the reader of the fact that a very mild fall, with a late beginning of winter, thus giving bees frequent flights, is a certain forerunner of diarrhea and losses of bees. The fall of 1884 was very mild. Bees took a flight every week till December 10, and never was bee-diarrhea so prevalent in the Unite States as during the succeeding winter.

Last fall my brother and I put 87 colonies into caves; 53 were put in 3 weeks before the usual time—I think about Nov. 10. I never saw bees winter any better than these are wintering; they have no signs of disease whatever. Every flight that bees get after Oct. 1 is a detriment. I doubt whether breeding in this latitude (42°) is any advantage after Oct. 1.

There are other things to be considered in the solution of this wintering problem, such as moisture, food, temperature, etc., but the most important thing is to get the bees in their winter repositories early.

Knoxville,♀ Iowa.

Local Convention Directory.

1886. *Time and place of Meeting.*

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Apr. 30.—Northern Ohio, at Wellington, O.
H. R. Boardman, Sec., E. Townsend, O.

May 1.—Linwood, at Rock Elm, Wis.
B. J. Thompson, Sec.

May 4,—W. N. Y. and N. Pa.. at Randolph, N. Y.
A, D. Jacobs, Sec., Jamestown, N. Y.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

May 11.—Cortland Union, at Cortland, N. Y.
D. F. Shattuck, Sec., Homer, N. Y.

May 18.—Central Michigan, at N. Lansing, Mich.
E. W. Wood, Sec., N. Lansing, Mich.

May 20.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Gathering Pollen.—H. E. Hill, Titusville,⊸ Pa., on April 9, 1886, says:

A warm spell of weather about March 25 opened the willow and soft maple. But on March 27 the temperature lowered to 30° above zero, which suspended work in the hives. We are having nice weather now, and the bees are carrying in pollen to-day.

Only One Colony Lost.—W. Stearns, Lima,⊸ O., on April 12, 1886, says:

Here the last season was a very poor one for honey; consequently very many colonies died during the past winter for want of honey. I lost only one colony out of 50 put into the cellar, and that one the mice destroyed. I intend to unite them down to 38. The bees are bringing in pollen to-day for the first.

Reversible Hives, etc. — Edwin Wilby, Toronto, Ont., on April 4, 1886, writes:

I think that Mr. Heddon's new hive is just the thing. I have long thought that the brood-nest should not be disturbed any more than is necessary. I commenced to keep bees 26 years ago, making my own hives, as I was a carriage-maker by trade. I commenced with the box-hive, at which time I had not heard of Mr. Langstroth's book. I afterward bought Langstroth's book, and made his style of hives after that. My bees never were troubled with foul brood, and I never lost any bees by having pollen left in the hives in the winter. I notice on page 184 is an article by Charles F. Muth, and as far as my experience goes I can endorse every word that he says. I wish to thank him for putting his experience in print. I always have kept bees for pleasure, but my son attends to them now. We have 26 colonies in the city, all in good condition, packed in sawdust 2 feet thick, back, front, and on each side of the hives. It has been 23° below zero the past winter here. We had very little surplus honey last summer. All my bees are wintered on the summer stands, 8 inches from the ground, under a water-proof shed. They stand on a platform, and all have 6 inches of sawdust under each hive on the platform. I never lose any except now and then one by a queen dying.

Success in Wintering.—Wm. B. McCormick, Uniontown,♀ Pa., on April 9, 1886, says:

I have wintered my 25 colonies of bees without any loss—9 colonies in the cellar and 16 packed on the summer stands; both did equally well. I think that my apiary is now entirely clear of foul brood, which destroyed my 40 colonies (save one) during the summer of 1883. I hope we may have a good honey season the coming summer.

Bees have Wintered Well, etc.—2—J. L. Comstock, (36-35), Sac City,⊸ Iowa, on April 12, 1886, writes:

I started with 9 colonies in the spring of 1885, increased them to 36, and took off 500 pounds of surplus honey. On Nov. 28, 1885, I put 36 colonies into the cellar. I put them out on April 7, 1886, and found one colony queenless, so I united it with another, which leaves me 35 good colonies to start with. We organized a bee-keepers' association here on March 27, known as the "Sac County Bee-Keepers' Association." The following officers were duly elected for the ensuing year: President, S. R. Culp; John Barlow, Vice-President; Wm. P. Drewry, Treasurer; J. L. Comstock, Secretary; Executive Committee, Wesley Cheney, Wm. P. Drewry, and Walter Harrison. The association is to meet on the last Saturday of each month at 10 a.m., at the Court House in Sac City, Iowa.

Experience in Wintering.—Thos. S. Wallace, Clayton,⊸ Ills., on March 31, 1886, writes:

I invariably put my bees into the cellar, which is about 16x36 feet with a partition in the centre, and with cemented floor. One room is used to store apples, potatoes, etc., and my bees; the other room is used for a kitchen and dining-room. I place the hives one on the other in rows just so I can pass between them. I close the entrances before I put them into the cellar. After they are all in I go through and let them all out. I have a ventilator in the bottom of each hive. I put about 50 colonies in the cellar about Dec. 1, and 50 more on Dec. 31, 1885. I left them in for about 3 months, when I put them out. I found 5 colonies dead—1 was out of honey, the other 4 had honey but not enough bees to keep up the heat. They had used up the honey that was in reach, but could not spread out to get more. Bees are in good condition up this date, but the weather is very poor for bees. It has been snowing every few days. I keep my bees on honey if they have it; if they have no honey I feed them sugar syrup. I think that pollen is certainly necessary for bees to eat, or nature would not have them gather so much of it. I think that more bees die from eating poor honey than from eating pollen. I do not think that pollen will hurt any healthy colony of bees in a proper place. I think that the moth will wholly subsist on pure wax. I have had them to hatch and breed in nice boxes of white clover honey, and almost destroy it before I would know it. They did not seem to eat the honey, but the wax.

No Dead Bees this Spring.—T. F. Bingham, Abronia,♀ Mich., on April 8, 1886, writes:

Bees had a nice flight to-day—only one colony dead from those that were wintered out-of-doors. Those in the cellar have been there for 5 months, and are as quiet as when put in. Shall put them out in a day or two. There are no dead bees around here this spring.

Bringing in Honey.— John Rey, East Saginaw,⊙ Mich., on April 8, 1886, says:

My bees have gone to work on the maples to-day, and are bringing in some honey. If the weather keeps warm the willows will be in bloom in a few days, and then the bees can get plenty of pollen. My bees came through the winter in good condition; I did not lose a colony. I think that fully 80 per cent. of the bees in Northern Michigan have wintered.

Bee-Keeping in Kentucky.—G. W. Ashby, Valley Station,♂ Ky., on April 5, 1886, writes:

For the last 10 days we have had one continued series of rain, hail, and snow storms. During the few days of warm weather that we had in March, the bees brought in pollen plentifully, and some water. I have a few Northern willows that the bees literally covered in their eagerness to gather everything in bloom. I have made some inquiry, and find that there has been but little loss in wintering, except among my bees. I have lost ¼; all by not feeding them early enough to give them time to cap their stores over, consequently it soured, and the capped honey was so scattered that they died, with plenty of honey, but they could not get at it. Some have lost 1 or 2 in 30 colonies; some none in 15 to 20. We have some "bee-gum" men here yet; one has 11, and lost one. He has 2 colonies in patent hives that wintered all right. I engaged to transfer all of his bees for him, and two or three others want theirs transferred. There is one here who has about 20 large "bee-gums" whose colonies stand year after year and cast very large swarms, most of which go to the woods. He hardly knows what honey is, as he gets so little of it. The white clover, I think, is not hurt. That is our main surplus crop. I have four acres of Alsike, and some melilot.

Working on Oats and Corn.—Dr. C. C. Miller, Marengo,♂ Ills., on April 14, 1886, says:

We have had very little weather for bees to fly, but they worked up about 2 bushels of ground corn and oats yesterday.

Sectional Hives.—H. M. Noble, Swedesburgh,○ Iowa, writes:

Are not bee-keepers deceived by discarding the Langstroth Hive for the different traps that are being manufactured now? I am about as old a bee-keeper as there is in the United States; I have kept bees over 50 years, and I find that the less fixtures you have the less profit. Why, I saw a bee hive 40 years ago that was in sectional parts so that one part of it could be taken off by cutting the combs with a wire. Any part could be reversed except the top section.

Bee-Keeping in Texas.—J. W. Eckman, Richmond,○ Texas, on April 6, 1886, writes:

On Jan. 28 bees commenced carrying in pollen. We have had a good deal of cold weather since that time. I had my first swarms on March 31. It is now nearly cold enough for frost, which stopped swarming to-day. From 190 I increased my apiary to 270 last season, and took 23,000 pounds of extracted honey. I have taken out about 1,000 pounds this spring that was left in the hives last fall on account of sickness, and there is about 3,000 or 4,000 pounds more in the hives that should be taken out, but I cannot on account of starting robbing. Our bees do all their swarming in April and the first of May, and gather no surplus honey until the middle or latter part of May, when basswood and horse-mint come into bloom.

Fine Prospect for White Clover.—Geo. W. Morris, Cornishville,⊙ Ky., on April 7, 1886, writes:

My bees have wintered well, considering the small amount of attention given them. I lost only one colony out of 20, and found another one that was queenless, which I gave to another weak colony. On March 14, 15, 16, 17, and 18, bees had good flights, and brought in some pollen; since then they have not had much chance to fly on account of cold, rainy weather. In looking over 108 colonies of my neighbor's bees, I found 15 dead colonies. They were, in the most part, black bees that succumbed. We have a fine prospect for white clover this season. I have already seen young bees on the wing. Snow has been falling for two days and nights here; it is now about 4 inches deep.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Frank Leslie's Sunday Magazine is redolent of Spring both in text and illustration. The Easter Festival, which comes this year on Apr. 25, its latest possible date, is largely dealt with. The "Ancient Customs of Easter Day," is a very interesting article, and Dr. Talmage's sermon, "The Queen of Festivals," is a powerful presentation of Easter lessons. "The Flight of the Bells," with its pretty picture, is a quaint French Easter legend. Full installments of the several serials, and many appropriate and enjoyable short articles and poems are in it. Altogether this May number is an exceptionally interesting one.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 19, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2lb. sections, 9@12c.

BEESWAX.—23@24c. per lb. Not much offered.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 20@23c., wholesale.

O. B. SMITH & Co., 423 Front Street.

DETROIT.

HONEY.—The supply of comb honey is considerably decreased and prices a trifle firmer. Best white in 1-lb. sections 13@14 cts.

BEESWAX.—Scarce at 23@25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ apvance on above prices. Extracted in barrels, 5@5½.

BEESWAX.—Firm at 22½c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 22@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.

BEESWAX.—Scarce at 25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted, 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & Co., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—This market is very poorly supplied with honey of any kind just now, and comb honey in 1-lb. sectons, and extracted in barrels or kegs, is not equal to the demand. We quote: Choice white 1-lb. sections, 16@18c. White extracted in kegs or barrels, 7½@8½c.; dark, in same, 6@7c.

BEESWAX.—Scarce at 25@26c.

A. V. BISHOP, 142 W. Water St.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19⅞x14½—Price 25 cents each.

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.**, in either **English** or **German**.

There will be a Rush for supplies needed in the apiary after awhile, and we cannot do better than to urge all to look over their stock, ascertain what will be needed, and get it on hand before it is necessary for use—thus avoiding the perplexity consequent upon its possible delay in reaching them in time.

Alsike Clover Seed.—We can furnish Alsike Clover Seed at $8.50 per bushel—or $2.25 per peck. These prices will take the place of those published in our Catalogue, until further notice.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

Advertisements.

200 COLONIES of Choice Italian Bees for Sale. For terms, adddess
W. J. DAVIS. (box 148),
13W9t YOUNGSVILLE, PA.

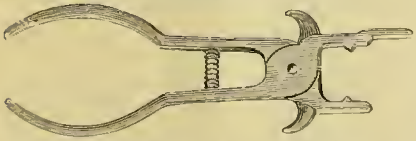
BEE Hives and Sections—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

20 SIMPLICITY Hives with Italian Bees, bred 10 years from Imported mothers, at $6.00.
15W3t A. L. GOULD, Ridgeville, Iroq. Co., Ills.

200 Colonies Italian & Hybrid Bees
FOR SALE,

IN 9 and 10 frame hives, all strong and healthy, wintered in the cellar. Will deliver them aboard of cars—for Italians, **$8.50** ; Hybrids at **$7.50**. Will guarantee as represented, or money refunded. **Italian Queens**—Untested, $1.00 ; Tested, $2.50. Send money by P. O. Order or Registered Letter.
16W8t **L. J. DIEHL**, BUTLER, IND.

JONES' FRAME-PLYERS.



FOR taking frames out of hives, or moving them in any way desired. It is made of galvanized iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Plyers. Price, 40 cts., by mail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

MODEST HIVES
FOR SALE CHEAP.

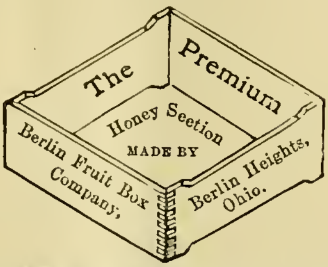
ANY one desiring 11-frame "**Modest Hives**," nailed and painted, and very cheap, will do well to correspond with the undersigned, who has a quantity he wishes to dispose of. **E. D. PERRY,**
16W1t DUNDEE, ILLS.

COMB FOUNDATION !
Five per cent. Discount.

UNTIL **May 1, 1886,** we will give a Discound of 5 per cent. on all orders for Comb Foundation, from the prices quoted in our Price Lists for 1886. This reduction is made on account of the decline in the price of Beeswax.
CHAS, DADANT & SON, Hamilton, Ill.
THOS. G. NEWMAN & SON, Chicago, Ill.

LOOK! LOOK!

ALL-WOOD Langstroth Frames, same as A. I. Root's make, $1.50 per 100 ; $12.50 per 1,000. Comb Foundation, made on latest improved Mill. Heavy, in 10 or 20 lb. box, 40 cts. per lb.; Thin, 45c. Simplicity Hives, Sections, Smokers, and Supplies generally. **Pure Italian Bees and Queens** a specialty. Circular and Price-List free.
C. M. DIXON,
16W4t PARRISH, Franklin Co., ILLS.



AWARDED First Premium at the Michigan State Fair in 1884; and again in 1885 at the Inter-State Fair held at St. Joseph, Mo. Prices greatly reduced. SPECIAL RATES on large lots. Address as above for price-list of Apiarian Supplies and Berry-Packages. 16W1t

Lewis' V-Groove One-Piece
SECTIONS.
Down, Down, Goes the Price !

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G. B. LEWIS & CO.,
WATERTOWN, WIS.
April 15, 1886. 16Wtf

Bee-Keepers' Supplies,

OF ALL KINDS,
Sections & Comb Foundation
A SPECIALTY.
125 colonies of Bees for sale
in Quinby frames, mostly Italians.

☞ These Bees will be SOLD CHEAP. Send for prices. Also, for Illustrated Price-List.
W. E. CLARK, successor to L. C. Root,
11A13t ORISKANY, Oneida County, N. Y.

ITALIAN BEES FOR SALE.

WE have wintered our 128 Colonies of Bees *without* loss. If you wish to try our *yellow* bees that are bred for business and pleasure, write us at once for particulars.
D. E. L'HOMMEDIEU & BRO.,
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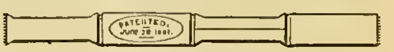
Prices Reduced.
THE "BOSS" ONE-PIECE
SECTIONS.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WE have **REDUCED** the **PRICES** on One-Piece Sections as follows :
One-Pound Sections, In lots of 500 to 3,000, ₩ 1,000, **$4.00**

☞ For larger orders write for prices. ☜

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., April 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

W. Z. HUTCIHNSON,

In order to more fully supply the wants of his customers, has entered into partnership with his neighbor, R. L. Taylor, and will offer for sale, bees (full colonies, or by the pound), queens, Given foundation, white poplar sections, hives, cases, feeders, empty combs, etc., etc. Also hens' eggs, for hatching, of three varieties. For circular and price-list, address **W. Z. HUTCHINSON.**
8Etf ROGERSVILLE, Genesee Co., MICH.

ITALIAN BEES AND QUEENS,
Plymouth Rock Eggs and Rabbits.
Send for Circular to, **C. WEEKS,**
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HOW to MONKEY with BEES
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J. W. Bittenbender, Knoxville, Marion Co., Iowa.
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A YEAR AMONG THE BEES,
BEING
A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.
BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 140 pages, well-printed and nicely bound in cloth. Address,
THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Italian Bees and Comb Foundation.

50 to 100 COLONIES of very choice Italian Bees for spring delivery. Prices greatly reduced. Nuclei, Queens, and Bees by the pound for the season.

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Wax made up by the lb. or worked for a share of the wax. Samples of foundation free. Price-List ready.
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Buckeye Sections---V-Groove.
White as snow. Any size. Very Cheap.

WE manufacture the Scientific Bee-Hive, shipped in the flat (body and frames); can be set up in 5 minutes, without hammer or nails. This hive beats them all for comb honey. Send for circular to
16C4t **J. B. MURRAY**, ADA, O.

TESTED ITALIAN QUEENS, $2.25; Untested, $1.25. After May 15, 25 cents less. Bees, $1.00 per lb. MISS A. M. TAYLOR,
16W.t Mulberry Grove, Bond Co., Ills.

FOR SALE.—Nine Colonies of Bees. Particulars address, Robt. Boylan, Portland, Mich
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REDUCED PRICES ON SUPPLIES.

One-pound Sections, $4.00 per 1,000. Two-pounds, $4.50 per 1,000.
Langstroth Frames, ready to nail, per hundred, $1.25.
Comb Foundation is subject to a discount of 5 per cent. until May 1.
Glass, 5x6, per box of 240 lights, reduced to $2.50.

Standard and Improved Langstroth Hives, cut and ready to nail, are reduced from 5 to 30 cents per hive, as will be noticed in the following table of **New Prices:**

STANDARD LANGSTROTH HIVES (14x18⅜ inches inside).

Quantity.	Numbers 1	2	3	4	5	6	7	8	9	10
5 hives, or more, each	90	$1.25	$1.60	$1.45	$1.75	$1.20	$1.70	$2.00	$1.30	$1.30
10 hives, or more, each	88	1.23	1.58	1.43	1.73	1.18	1.68	1.98	1.28	1.28
25 hives, or more, each	85	1.20	1.55	1.40	1.70	1.15	1.65	1.95	1.25	1.25
50 hives, or more, each	80	1.15	1.50	1.35	1.65	1.10	1.60	1.90	1.20	1.20
100 hives, or more, each	75	1.10	1.45	1.30	1.60	1.05	1.55	1.85	1.15	1.15

IMPROVED LANGSTROTH HIVES—With Manipulating Side.

Quantity.	Numbers 1	2	3	4	5	6	7	8	9	10
5 hives, or more, ea.	$1.30	$1.65	$2.00	$1.90	$2.20	$1.65	$2.10	$2.45	$1.65	$1.65
10 hives, or more, ea.	1.28	1.63	1.98	1.88	2.18	1.63	2.08	2.43	1.63	1.63
25 hives, or more, ea.	1.25	1.60	1.95	1.85	2.15	1.60	2.05	2.40	1.60	1.60
50 hives, or more, ea.	1.20	1.55	1.90	1.80	2.10	1.55	2.00	2.35	1.55	1.55
100 hives, or more, ea.	1.15	1.50	1.85	1.75	2.05	1.50	1.95	2.30	1.50	1.50

For description and prices of these hives nailed, we refer our customers to our Catalogue for 1886, pages 4 & 5. These prices for material in the flat, take the place of those on p. 6.

THOS. G. NEWMAN & SON, 923 & 925 West Madison St., CHICAGO, ILL.

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THE GIVEN PRESS stands in the **front rank** for manufacturing **FOUNDATION in Wired Frames**, as well as foundation for **SECTIONS.** Without a dissenting voice, all of our customers affirm its superiority.

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J. R. CALDWELL & CO.,
1Atf HOOPESTON, Vermillion Co., ILL.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
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MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH ANE MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

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(ESTABLISHED IN 1883.)

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200 COLONIES OF ITALIAN BEES

FOR SALE.—In Langstroth hives, wired foundation frames. Very low. Also 300 of our Improved Sectional Honey-Cases used with or without separators. Circular free.

A. J. & E. HATFIELD,
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THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. **Circular Free. T. L. VonDorn,** *Omaha, Neb.* **None Better**
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PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
11Atf O. CLUTE, **Iowa City, Iowa.**

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

SOLD!

HAVING Sold the 100 Colonies of Bees offered in the March Numbers of this JOURNAL, I am now booking orders for **Nuclei Colonies and Queens Only.** Also **Bee-Keepers' Supplies.** Send for 1886 Price-List. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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LARGE SALES—SMALL PROFITS.

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Book and sample latest improved Drone and Queen Trap, by mail.................. 1 50
Book and tested queen, any race (from June to October).................. 2 00
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Money Order office at Salem, Mass. Postage stamps will do for odd change. Send for Circulars.

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WE, the *original inventors* of the one-piece sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms.

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60 Colonies of Bees For Sale,

FOR particulars, call on or address,
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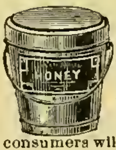
NEW ONE-POUND HONEY PAIL.



THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
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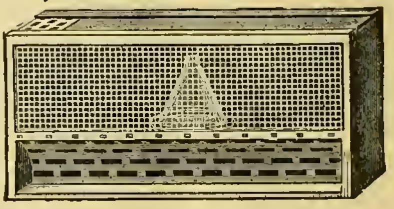
Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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FREE A book of 160 pages on & Courtship, sent free by the Union Pub. Co., Newark, N. J. Send 5c. for postage. **LOVE**
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TWO-POUND

SECTIONS.

Job Lot—Cheap!

WE have received a Job Lot of 25,000 One-Piece Sections with square groove which we will close out at **$3.50** per 1,000, or $2.00 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. April 28, 1886. No. 17.

Those who Plant potatoes should read the "A B C of Potato Culture" before planting.

* * *

Mr. Boar, one of the prominent citizens of Gordon, Ga., met with a most singular death lately. On his return from a trip over his field he noticed bees swarming. He undertook to hive them, when they turned upon him, settling upon his face, hands and neck, and stung him to death.

* * *

The Vineyard Men are Speaking Out.—Mr. E. Baxter, one of the proprietors of the "Golden Hills Vineyards," at Nauvoo, Ills., writes as follows concerning the article by Mr. N. W. McLain, in the last issue of the BEE JOURNAL:

> I have just read the article on "Bees *vs.* Fruit," on page 245 of the AMERICAN BEE JOURNAL, which coincides with my personal observations for years past; as I have seen the bees wild and eager for food, on clusters that could yield nothing to them, being sound in the berry.

The evidence is accumulating that bees do *not* injure sound grapes—and comes from the careful and successful grape-growers themselves.

* * *

The Great Enemy of knowledge is not error, but inertness. All that we want is discussion, and then we are sure to do well, no matter what our blunders may be. One error conflicts with another; each destroys its opponent, and the truth is evolved. This is the course of the human mind, and it is from this point of view that the authors of new ideas, the proposers of new contrivances and the originators of new heresies are benefactors of their species; whether they are right or wrong is the least part of the question. They tend to excite the mind; they disturb the public sloth.—*Buckle.*

* * *

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

The Alternating Hive, mentioned by Mr. Kretchmer, on page 264, came duly, and has been examined carefully. This matter reminds us of a story—one that greatly impressed us during our school-days, over 40 years ago. It was this: Two men were coming towards each other from different directions, and both saw a lizard-like reptile on a low branch of a tree. Both men admired its color. One declared that it was blood-red; the other, astonished at the color-blindness of his friend, said he was a fool—that the color was bottle-green. Both men became excited, and quarreled vigorously. They rushed at each other to decide by blows the controversy—when, taking a look at the reptile, each was astonished to find that both were right! It was a chameleon, and its color in the sunlight, but reflected the hues of the surrounding objects. Being disturbed by its visitors it became mottled, the colors varying in different parts of the body, as it is capable of doing very rapidly. It was blood-red or bottle-green by turns, and both of the disputants were right!

Just so, in this old hive matter, both are right and both are wrong. Mr. Heddon, no doubt, relied upon what he read in the Patent Specifications; in the last paragraph of the first page it is distinctly stated that "the bottom-board, G, of the box is permanently attached to the sides."

In the hive sent by Mr. Kretchmer the bottom-board is attached to one side only, and in a peculiar manner. It is attached to one end of the alighting-board by a piece of sheet-iron, and also to a piece at the rear of the hive in the same manner. Both the alighting-board and the piece at the rear of the hive, swing horizontally on screws near one corner, by which they are attached to the box.

Mr. Heddon judged by what he read in the Patent Specifications, and Mr. Kretchmer had in mind the peculiar bottom of a hive, as shown in the model—and the story of the chameleon is a good illustration; fuller light reveals the true situation.

But why discuss these minor matters any further? Mr. Kretchmer says on page 264, that he has "carefully examined Mr. Heddon's hive and special system for which it was constructed," and adds the following as his conclusions:

> I most cheerfully admit, with all due honor to Mr. Heddon, that many of the various combinations *are new*, when applied to that system of management and manipulations laid down in his book; and since reading his patent, I believe that the *claims* and combinations in it are valid.

We did not intend to have anything to say on this controversy, but now being appealed to by both parties, we have given the foregoing, and hope it will end the discussion now too long drawn out.

* * *

L. Reed, Orono, Mich., has sent us a sample of the louse nectar which the bees gathered last fall for winter stores. Of course it cost him a loss of about 20 per cent. of his bees. Fortunately for Mr. Reed's bees, the winter has been a short and mild one, and he adds:

> My bees are now in splendid condition; young bees are playing to-day. We have lately had warm June weather; and no frosts for the last ten days. Bees are working on the soft maples and willows. The prospect is good for a large yield of honey.

In Testing Beeswax, says an exchange, when it is chewed it should have no disagreeable taste, and must not stick to the teeth. In the adulterated wax the nature of the foreign material can generally be detected by the taste; the addition of fat can generally be readily detected. If it sticks to the teeth, the presence of resin may be assumed. A simple method of detecting the presence of fat in wax consists in melting it and placing a drop on a piece of woolen cloth; after it is perfectly cold and solidified, pour on a few drops of 90 per cent. alcohol, and rub the cloth between the hands. The wax will be converted into dust, and will easily separate from the cloth if it contains no fat, and will leave no stain; when it contains fat it will leave grease spots.

* * *

The Bees are Swarming.—This spring is the earliest for many years in this latitude. Mr. John C. Gilliland, of Bloomfield, Ind., writes us as follows, just as the forms for this JOURNAL are being closed up. It is dated April 22, 1886:

> My Italians cast the first swarm to-day; earlier by three weeks than any previous year. They are working with a rush on rock maple and fruit bloom; with prospect of the best honey season for several years.

* * *

New Price-Lists have been received from the following persons:

F. Boomhower, Gallupville, N. Y.—11 pages—Bees and Queens.

A. Cox, White Lick, Ind.—1 page—Bees and Queens.

A. F. Stauffer & Co., Sterling, Ills.—8 pages—Queens, Bees, and Bee-Keepers' Supplies.

Catonsville Manufacturing Co., Catonsville, Md.—11 pages—Bee-Keepers' Supplies.

A. B. Johnson, Clarkton, N. C.—1 page—Bees and Queens.

C. Weckesser, Marshallville, O.—4 pages—Bees, Queens, Plants, etc.

A. I. Root, Medina, Ohio — 40 pages — Bee-Keepers' Supplies.

Thomas Horn, Sherburne, N. Y.—1 page—Bees and Queens. This was accompanied with a queen shipping-cage containing a few living bees, which came in excellent condition.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

* * *

Bright, Beautiful and Charming as May Blossoms comes the *American Agriculturist* for May. With this number appears the first of the series of engravings of the homes of our farmer presidents—23 inches long, 17 inches wide, executed in the best style of art, and presenting a complete view of Monticello. The engraving likewise embraces front and back views of the residence, the tomb of Jefferson, and also neighboring objects of interest. The long and complete description of the engraving by James Parton, the American historian, will be read with surprising interest. The engravings are presented to all subscribers to the *American Agriculturist* as they appear. The price of the *American Agriculturist*, English or German, is $1.50 a year. We will club it with the AMERICAN BEE JOURNAL for $2.25 a year, each subscriber to receive both papers and the special engraving and descriptions by American authors as they appear.

QUERIES

WITH

REPLIES by Prominent Apiarists.

Taking off Surplus Honey.

Query, No. 242.—The greatest trouble I have is in taking off the surplus honey from the hives. Which is the best way of doing it and save the most bees?—N. Y.

I do not understand what you are "driving at." All the bees should be saved by any method.—G. M. DOOLITTLE.

Smoke the bees down in the case of honey. Then remove it quickly to the honey-house, having a bee-escape window.—G. L. TINKER.

Place the cases in a box or room, and the bees will soon leave the combs and fly back to the hive. Of course in a room there must be holes at the tops of the windows, or else windows that open out easily.—A. J. COOK.

The best way to do it is to have light, shallow surplus-cases, and shake out nearly all the bees, and put the cases where the remainder will leave, yet where robbers will not enter. I use a screen-house. I never heard of destroying bees to get them out of the supers.—JAMES HEDDON.

Wintering Bees in a House-Apiary.

Query, No. 243.—A friend of mine has a house apiary. The bees enter by large chutes which are flush with the weather-boarding on the outside; on the inside end of these chutes are placed the hives, which are tall box-hives. The house is double-walled, with two large ventilators in the bottom 2 feet square, and one overhead of the same size. Also, on the back end of the chutes, and underneath the hives, are holes covered with wire-cloth. His bees wintered very poorly with plenty of good stores. What was the cause? There is a strong current of air passing continually in at the entrance and out of the holes at the back end of the chute. Was this a detriment? Each hive is surmounted by a cap packed with hay, and there was not the least bit of moisture collected in the hay, while the glass and combs were often frosted over. Why was this? Would it be a good plan to close the outside entrances altogether, open the air holes in the hives on the inside of the house, and keep the room warm, say 45°, all winter? If not, how should they be prepared to winter well?—D. B. U., Ohio.

I do not know. I think that house-apiaries have failed in most cases to give satisfaction.—A. J. COOK.

I should say that the room was too cold, and the bees had too much ventilation also. Forty-five degrees with little ventilation, seems to do the best with me.—G. M. DOOLITTLE.

How do you *know* that the stores were good? Did other bees in the immediate vicinity winter well, when prepared in a different manner? I cannot say that the current of air was a detriment; it might have lowered the temperature, otherwise I cannot see what harm it could do. The heat arising from the bees probably kept the hay above them dry. I would do as suggested.—W. Z. HUTCHINSON.

I believe that winter losses are caused by low temperature and bad food. I should close up the "chutes" and give the bees ventilation from the inside, and keep the temperature of the room up to 40° to 50°.—JAMES HEDDON.

All currents of air are disturbing to bees in winter confinement, especially when entering that condition I am pleased to call hibernation. The fact that there was frost in the hives is evidence enough why the bees did not winter well. Raise the temperature in the bee-house by all means, closing the outside entrances. If the room be heated the ventilation will take care of itself, and the air be made pure and dry—two of the conditions of success.—G. L. TINKER.

If we were to advise, we would say take the bees out of that house altogether, or open the side so the bees can have sunshine when there is any; or else keep them at 45° during cold weather. This last way would be the hardest to put into practice.—DADANT & SON.

Cellar Wintering of Bees.

Query, No. 244.—Would a cellar under a residence be a good place to winter bees? It never freezes vegetables.—T. J.

Most likely it would.—C. C. MILLER.

"Yes," if the bees will not be affected by the jar from the closing of doors.—H. D. CUTTING.

It might be a very good place, and it might be a very poor place. I have used two such cellars this winter. The place I thought the most perfect gave the poorest result. A trial of such repositories is the best test of their fitness for such a purpose.—H. R. BOARDMAN.

Yes, if the temperature can be regulated so as to be uniform the whole season, and be kept about 45°, Fahr., above zero. Unless a uniform temperature can be maintained, it will be found far safer to winter bees on the summer stands. This question of wintering, however, is the bugbear of the business, and as yet it is not well understood, even by the most expert.—J. E. POND, JR.

Yes.—JAMES HEDDON.

Bees Packed on the Summer Stands.

Query, No. 245.—My bees are in hives packed on the summer stands with the brood-chambers contracted, hay chaff all around and above, and burlap over the frames, with no top ventilation. Above the burlap is a half-story filled with hay chaff, which is very damp, and in some cases moldy, but the burlap is dry. Would you have recommended taking off the burlap by March 1, and putting in its place enameled cloth, also replacing a dry chaff cushion? Would it have forwarded breeding and lessened the chances of spring dwindling?—Rhode Island.

This dampness is probably caused by lack of ventilation above the hay chaff. I should remove the damp packing and replace with dry. I am not certain that it would forward breeding or lessen the chances of spring dwindling.—W. Z. HUTCHINSON.

No, I should have left them without any disturbance.—A. J. COOK.

A better plan would be to remove the damp, moldy chaff and substitute dry chaff. I prefer burlap to enameled cloth until settled warm weather comes.—G. M. DOOLITTLE.

I think that I should have put in dry chaff, leaving on the burlap.—C. C. MILLER.

We do not know that it would have made any material difference with the breeding, but we would always recommend the removing of the packing in March, and using a tight-fitting cloth and a straw-mat over it.—DADANT & SON.

On warm, pleasant days the covers of hives should be taken off, and the cushions exposed to the sun. In no case would I recommend enameled cloth over the brood-frames either in winter or spring. It rapidly conducts away the heat of the bees and prevents all moisture from arising. When laid upon frames closed up tight with wooden strips in winter, the frames will be found soaking wet. On other hives prepared the same, but without the cloth, all would be dry, showing that ½-inch of solid wood is no hindrance to the escape of moisture, and it is, in my opinion, the best winter covering next to the bees that can be used, as it confines the heat and permits the free upward escape of moisture.—G. L. TINKER.

My rule is to clean out hives and put on enameled cloth as early as it is safe to examine the colonies. Two points are thus gained, viz: 1. The heat generated is all retained in the hive. 2. This I consider of importance, the moisture is retained also, and the bees enabled to get water therefrom for the brood, when, perhaps, they could not get it outside.—J. E. POND, JR.

If the burlap is all right leave it for the present. Throw out the damp hay and replace with dry, or open the tops of the hives and let in the sun, and it will be all right. It is a benefit to open up the tops of hives to let in the sun and warm it up and dry it out.—H. D. CUTTING.

If the bees were dry and healthy I would have left them just as they were. But if there was evidence of dampness inside of the apartment occupied by the bees, I would have removed the damp chaff and let the sunshine dry out the upper story of the hive, and repacked it with dry material. I make it a rule to remove the covers from all hives that show dampness in the early spring, and let in the sunshine for a few hours. It puts new life into the bees.—G. W. DEMAREE.

I should have made the change you mention, but I should have put on a good board, and discarded the enameled cloth once and forever.—JAMES HEDDON.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ☉ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest; O⌐ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

The Medicinal Properties of Honey.

G. P. HACHENBERG, M. D.

The physiological effects of honey are singularly effective, though mild and passive in their character. It occupies a broad line between alimentation and therapeutics, being both food and medicine; therefore it belongs to that class of medicinal remedies that cure indirectly, that is, by putting the vital forces in such a condition as to enable them to overcome diseased action. Mineral waters, cod-liver oil, glycerine, malt, etc., all belong to this class of remedies.

Before speaking of the curative properties of honey we will note its physical properties.

In the first place, where is honey from? Some assert that it is a secretion of the bee, others that it is a natural product in plants. If it is a natural vegetable product, the laboratory would have furnished us, long ago, with genuine honey. It must be remembered that the sugar and glucose in the flowers and fruit that bees resort to, is never honey until it has passed through the stomach of the bee, and please do not call this organ a bladder, as some do. It is virtually a stomach and performs the functions of that organ. The bee gathers into it a saccharine material. After its reception, a gastric element is mixed with it for two purposes, one to give it the character of honey, and the other to make it assimulative for the formation of an oil, that is, perfect wax.

It is generally supposed that after a bee returns to its hive with its treasure, that it hurriedly dumps it into a cell and goes out for another, and so on. This is not the case; when the bee returns, from fatigue and under the stupefying influence of digestion, it has to abide its time, both to recuperate, and to get rid of its burden of honey and wax. We have reason to believe that even after the honey is deposited into the cells, it has yet to receive the finishing touch of perfection by the bees, in all probability by the young bees of the hive. The young bees are active house-keepers in the hive; they live on the honey imported, and this rich, concentrated food demands an excess of gastric secretion; when coming to a certain point, it creates a regurgitation something akin to vomiting. This the young bee economically puts back into the cells, thus completing the process of honey making. Another point as to the character of the bee's stomach: As soon as it is unloaded, an insatiable sense of hunger and restlessness ensues, which at once forces the old bee to work abroad and the young at home. We all know how to respect the buzz of the hungry bee, and admire the sweet disposition of the one that has just finished a sumptuous repast. And how rare are family jars when the pantry is ever full. It is Nature's law, in all the same.

We go more especially into these details, to point out the medical properties of honey. It has two physical elements that make it particularly a medicine, viz. 1. An aromatic irritant imparted to it by the stomach of the bee. 2. Its ready transformation into fat; without those complicated physiological operations necessary to transfer other saccharine elements into this material.

These make it at once both a local and constitutional remedy. Locally, it is an irritant, sedative, emoluent, detergent, antiseptic, resolvent, rubefacient and a parasiticide. Constitutionally it is nutrient, demulcent, laxative, deobstruent, alterative, tonic, expectorant, restorative, febrifuge, diuretic, diaphoretic, vermifuge and antaphrodisiac, as well as containing certain poisonous properties manifested under peculiar circumstances.

When we say that honey is both an irritant and a sedative we mean that its first effects may irritate, followed with a sedative effect. All liniments work beneficially on this principle, the same with the most of eye-waters, etc. The solution of honey as an eye-water, proves particularly beneficial on account of its antiseptic, absorbent or resolvent properties. It cures inflammation of the eye, in the way a solution of borac acid does, that is, mainly by reason of its antiseptic and sedative properties.

The irritant properties of honey are, in a great measure, destroyed by dilution. Therefore as a topical irritant, where we wish to favor resolution, by counteraction, it is used in a pure state or in conjunction with other more active irritants. It is its irritant or rubefacient effect joined with its emoluent nature, that precipitate local inflammation into suppuration, and is, therefore, a suitable remedy for abcesses, boils, whitlows, carbuncles, etc. Therefore, woe to the one that applies a honey-plaster over an inflamed eye, in place of the solution! As a rubefacient and absorbent it makes an excellent local application in glandular swelling, and in chronic tumefaction, in particular when joined with iodine, iodoform or mercury.

On account of the temperature of the body, it is difficult to keep pure, undiluted honey on the surface; this can in a measure be remedied by saturating layers of Canton flannel, and apply them, changing frequently.

I speak of it as a parasiticide not only in connection with the theory of the pathagenesis of diseases as advocated by Pasteur, Cohn, Koch, Klebs, and others who have investigated the bacteria, but even those who created several skin diseases, well known by almost every one. Take honey for the destruction of the bacteria, because of its antiseptic, tonic and laxative effects, its daily use would disarm every dire and malignant disease of its destructive force. Cholera, yellow fever, small-pox, scarlatina and diphtheria may run their course as before, but comparatively in such a mild form as to afford but little anxiety. I only speak of honey as a preventive of malignancy in these diseases, and not as a curative agent.

I have reason to think that it may even serve as a prophylaxis in epidemic diseases. Last year, Austin and vicinity were afflicted with an epidemic of dengue, prostrating nine-tenths of its inhabitants! My residence and apiary is two miles south from the city; and I suppose almost every one in our neighborhood had the disease; however my family and servants never took it, although we kept a daily communication with the city, and with persons having the disease. I cannot account for this exemption, which created a great surprise among our friends, unless it was the honey we ate almost at every meal.

The constitutional effects of honey cannot be fully understood and appreciated, except to study it from its medical properties, as represented above. All scientific investigation of remedies are made in like manner. It is the text to a long and complicated sermon. Every physician will read in it such a multiplicity of applications, that would astonish the uninitiated.

As a nutrient I will not speak of it as food but in connection with its properties that serve to arrest the waste of certain diseases, in particular in consumption. The important features of the medical properties of honey lie in the nutrient, expectorant, deobstruent and restorative effects in the management of consumption, and its allied diseases. Now let us go back to a fact that exists in the process of making honey. No honey could be had, if it were not for its ready metamorphosis into oil, or in other words in the making of wax, as stated. The great object in the treatment of consumption is to arrest waste. Therefore we resort to the use of oils or remedies that will readily make fat in the system. But the great difficulty in the way, is to get the system to accept these remedies and effect their assimilation. Under Leibig's authority we give sugar freely to make fat, but the system often refuses it, as it does the oil, for before it can be assimilated it has to be changed into a glucose, or really into pretty much what honey itself is. This alone gives us a great advantage in giving honey to stay the waste caused by disease, tha have in no other remedy.

Honey in being assimilated is disposed of in three ways: what is not deposited in the cellular tissue as fat, is consumed by the liver, and its volatile principle is eliminated by the lungs. This elimination is a matter of the greatest importance as a remedy in all pulmonary disorders. But the most remarkable feature of honey as a pulmonary sedative is its administration by atomization and inhalation. The spray arising in extracting, has been proved to exert a very beneficial effect upon cough and dyspnæa, thus revealing its curative tendency.

Austin, ⊙ Tex.

For the American Bee Journal.

"Feeding Sugar—Reversible Hives."

W. Z. HUTCHINSON.

In my article under the above heading, I thought I was sufficiently explicit in regard to the difference between *hives* and *brood-chambers*. The hive (not brood-chamber), referred to by Mr. Dadant, and described on page 149, Vol. I, of American Bee Journal, was constructed of straw rings or sections 4 or 5 inches high. There were no frames, the combs being built solidly from the top to the bottom of the hive, and when it was necessary to separate the sections a wire was drawn between them, thus cutting the combs apart. In the spring, or if a colony were weak, only one section was used. As the colony increased in strength another section was added, etc., but the sections were all alike, and there was no point below which the hive was brood-chamber, and above which it was surplus apartment, any more than there is in an ordinary box-hive.

All the other references given by Mr. Dadant refer to sectional hives, not brood-chambers; the purposes and functions of which are altogether different.

If the tiering up of hives is to be considered the same as Mr. Heddon's sectional brood-chamber, then I must admit that I used too strong language when speaking of the "*newness* of the *grandest* of all the *grand* features of the Heddon hive." I am aware that hives have been formed by tiering up several stories; that these stories have been made both shallow and deep; and that brood has been reared in more than one of these stories, at the same time and in the same hive; but I did not suppose that these hives were made and used in this manner in order that the *brood-chamber* might be divided horizontally in sections; I supposed that other objects were in view in making hives in this manner, and that the result of having brood in more than one section came about *incidentally*, was considered of no value in itself, and no advantage was taken of the fact. It is, I believe, to Mr. Heddon that belongs the honor of discovering that there is an advantage in being able to divide the *brood-chamber* horizontally, into sectional, interchangeable parts.

All those old hives mentioned by Mr. Dadant, are, I suppose, now dead, and laid aside for something that is adapted to the needs of bee-keepers under the light of the advanced state of the art. I know, by actual test, that the Heddon hive is *practical* and gives the best of results. I sold some of the "results" last fall, and at a paying price, too, considering how much easier I produced it with the new hive and system of management.

Mr. Dadant says that the reversing of hives has been practiced in France a long time, but is now being abandoned. Reversing is either a damage or a benefit, according to the propriety of doing it. Neither the reversing of combs nor the use of sectional brood-chambers *necessitates* feeding for winter, as I have explained in a previous article, but allows the choice of natural stores in exactly the best shape for winter,

FEEDING SUGAR TO BEES.

I had never supposed that Mr. Heddon claimed to be original or prior in advocating that the cause of bee-diarrhea was in the food. I *think* that he never made such a claim. If I am correct, he has simply been a strenuous advocate of the theory.

I have just read Mr. Dadant's able essay on page 325 of the Bee Journal for 1881, and I am pleased to note such able support of the food and pollen theory. I also notice the same doctrine advocated by Mr. Heddon on pages 137, 275 and 283 of the same volume, and all published *previous* to Mr. Dadant's article.

Mr. Dadant says that the replacing of natural stores with sugar costs time and money. If by the use of proper hives and management we get all the honey stored in sections where it can be sold for *three times* what sugar would cost, and we have simply to make the syrup and feed it to the bees, it appears to me as though it was time and money well spent.

Rogersville, δ Mich.

For the American Bee Journal.

Opposition to Bee-Keeping.

C. G. BEITEL.

This is a subject which sooner or later will become a serious matter, if not promptly attended to. While we do not object to an association for the mutual protection of bee-keepers, and for the accumulation of a fund for their defense against the attacks of men, who, in their ignorance, may honestly feel themselves aggrieved by the bees of their neighbors, yet there are two old "saws," namely, "An ounce of prevention is worth more than a pound of cure," and "A stitch in time, saves nine," which may be very forcibly applied to this subject.

By the first I mean, that by education we may teach the ignorant their errors; let them once understand that the bee, so far from being their enemy, is one of their best friends, and we will hear of no more lawsuits about them. This can be accomplished by the diffusion of all the knowledge upon the subject, collected in pamphlet or book form, and disseminated broad-cast among the fruit-growers; let them once comprehend that it is money in their pockets as well as in that of the bee-keeper, and fruit-growing and bee-keeping will go hand in hand, all over our broad land, as it does now among the more intelligent.

It is true the bee may sometimes be a tresspasser, as for instance, in the drying of fruit, raisins, etc., but this is only in common with wasps, hornets, and the common fly, and here I think the owner is much to blame; he should not dry fruit in the open air without screens; it is a filthy practice, and should be condemned.

Again: "A stitch in time," etc.: By this I mean that by prompt action in the matter of education, much litigation may be prevented. The trial of cases before ignorant juries, nay, even before judges ignorant on this subject, carried away by the testimony of interested witnesses, may establish precedents in the lower courts, which, if not reversed, will be looked upon by courts of co-ordinate jurisdiction in sister States, as guides, and in the course of time establish a line of decisions, which now the higher courts would hesitate to shake. Judges do not like to reverse each other—they prefer a uniform system of jurisprudence, and often adopt a ruling inconsistent with their own opinions, rather than disturb the symmetry of the law; therefore, let these decisions start out right, and soon all will be lovely for the bee-keeper.

As a sample of the literature that I would recommend for dissemination, I append an abstract from the reports of the State Board of Agriculture of Pennsylvania, for 1884, by M. W. Oliver, chairman: "To obtain such information as your committee thought desirable to embody in this report, they prepared and sent to a number of prominent apiarists within the State, the following list of questions, viz. [I select but two]: 'Are bees destructive to fruit? Are bees of importance in the fertilization of flowers?'" To these questions we have received answers, from which I condense as follows:

To the first we answer: In no sense whatever. We hold to the opinion that so long as fruit is in a sound condition the bees will never harm it; nor have they the power to do so. It is only when fruit is injured by other insects, by over-ripeness, or other causes, that the bees step in to fill their place as nature's scavengers. Many bee-keepers plant grape-vines in their apiaries, and so trellis them as to give shade to the bees. From these vines as perfect clusters of fruit are plucked as from vines not visited by the bees. Our experience has been that while the rose-bugs have destroyed all the fruit on vines just outside, that upon the vines inside the apiary has been found unmolested; so that we count them guardians, rather than *destroyers, of fruit*.

As to the second: "We hold strongly to the affirmative side of this question. We hold, with others, that plants only secrete nectar that they may attract insects. And why, we imagine you are ready to ask, this need of insect visits? It is that they may serve as 'marriage priests' in the great work of fertilizing the flowers. It is well know that many plants, such as willows and chestnuts, are diœcious. The male element, the pollen, and the female element, the ovules, are on different plants; and so the plants are absolutely dependent upon insects for fertilization. The pollen attracts the insect to the staminate flowers, while the nectar entices them to visit the pistillate bloom. In the case of the strawberry—of which good old Isaac Walton wrote, 'Doubtless God might have made a better fruit than the strawberry; but doubtless God never did'—some varieties would remain barren but for these kindly ministrations of bees and other insects. In some plants, we find the stamens and pistils are on the same flower, but so peculiar are their structural peculiarities that unless insects were wooed by the coveted nectar, fertilization would be impossible."

Here follow a number of experiments to prove what has been stated, many of them having appeared in the BEE JOURNAL before; it is not necessary to repeat them, with one exception, namely: "A member of this committee cites a case which came under his observation, where the yield of an orange grove fell off when, upon the death of the owner, the bees were sold off; and when, upon the establishment of a new apiary, the yield was substantially increased."

The fruit-growers of California might learn a lesson from the foregoing, and if they persist in their suicidal course against the bee-keepers they will ere long find that they were playing with a double-edged sword.

Easton, o+ Pa.

For the American Bee Journal.

Management for the Most Honey.

G. M. ALVES.

How may I manage my bees so as to obtain the greatest amount of honey?

At this season of the year we frequently hear such questions as the above. Now the great difficulty in properly answering them lies in the fact that conditions differ—an answer that would be good for one locality would not be good for another locality. No man is well fitted for bee-keeping who does not study the conditions of his locality. To blindly follow a guide-book in all cases is folly. Such books are of great value, but after all we must do our own work in order to succeed.

I propose to answer the above question here in as short a space as possible My answer is based upon repeated tests of different methods, and also upon what I think is a careful study of my conditions. Remember, I am speaking now for my own location and conditions. The directions might or might not hold good for another location. I know they would not for many conditions that I could describe. Readers versed in current literature and opinions, may be surprised at some of my directions, but, fellow-bee-keepers, I have been all along there in practice.

But first let me tell how my bees do when left in "unrestricted nature." Eliminating exceptionable years, I have found that the apple, pear, etc., bloom here about April 20. This the bees use to build up on. About May 15, the locust, raspberry, tulip-tree and white clover bloom. The bees use the first three also to build up on, though sometimes they will store tulip-tree honey in the surplus department, but not often. After these are all gone the bees commence on the white clover. For a while they work briskly, and if it is well filled up below, they will carry the honey up-stairs, but as a rule, a lazy spell soon comes over them, and if permitted they will hang listlessly on the shady side of the hive. If driven in, they hang idly in the sections brooding upon "going west." In the mean-time the queen has well nigh suspended work, and trims herself—but in no hurry,—for emigration.

All of this idleness goes on when the hive is over-flowing with should-be-workers, and at a time when the white clover is secreting its maximum nectar. The bees are in no hurry to work or leave. They seem to look around lazily and say, "We've done enough for posterity and now propose to take a good rest before we start out for ourselves." But finally the time does come for leave-taking. Then there is activity in the comb indeed! Out they rush pell-mell, and the queen among them in almost virgin proportions. After hiving the swarm, let us go and look at the parent colony. Mind you, now, this hive is right here—not in New York—not in Michigan—not in Ohio—not in northern Illinois, where those bee-books were written; but right here, here in south-western Kentucky. Now what do we find? Those books tell us that we will find "much brood in all stages of development," but we do not at all; and let me say confidentially, that I have always found just what we now find—a great deal of sealed brood, but very little unsealed brood. See how many empty cells there are. The queen has been too much occupied with her corsets to lay in them, and her daughters have been too lazy to put honey in them.

But for the sequel: The new colony works mightily, but alas! if they can fill their brood-chamber before our dry weather cuts off the clover, they do full average well. We may, however, count on getting some golden-rod honey from them after the Autumn rains begin. The parent colony, if it casts no further swarms, will give, on an average, from 15 to 20 pounds of clover honey before the dry weather comes; and likewise a surplus in the autumn.

In my locality, such was "unrestricted nature!" I have found by repeated tests, that art can improve on nature here.

After trying all the methods of the books, I have found the following one much the best; and it is one that does not require the rearing of a queen: First, as early as practicable, stimulate by feeding; afterward supplement this by uncapping sealed honey. I have never tried inverting, but I will. I do not like spreading the brood on account of the risk. If the weather is favorable afterward, you have done a good thing; if it is not, you have spoilt your colony for the season.

Now with all stimulating methods we must carefully watch that the bees do not get short in stores, as in such a case we would much better have let them alone. If we have carefully done our work, our hives, by the time the tulip-tree blossoms fail, will be running over with bees. Now we go to each hive in this condition and place on its stand a very contracted brood-chamber (one of Mr. Heddon's cases would be excellent), filled with foundation. Shake every bee in front. Empty frames or frames with only starters will not answer well for the reason that the queen at this time usually begins her resting spell, and at such times the bees are prone to build drone-comb in the brood-chamber. I have tested this sufficiently to accept it with me as a general fact.

Now, on the same day, or the day after, place on a case of sections, and after the bees have filled it about one-third full, put between it and the brood-chamber another case of sections, and so on until the clover season is over. The reason I use a contracted brood-chamber is because I have found by tests that more honey will be gathered than with a larger brood-chamber. I rest on the fact, but I presume the reason is that bees, like people, are inclined to slacken work when they see enough around them; whereas with the contracted brood-chamber they do not see enough around them, and in the necessity of the case must go up-stairs for storage room; and as they continually find a void between the brood-chamber and the honey above, they strive desperately to fill the gap, thus acquiring a momentum of work that stops only with the failing of nectar in the fields.

By this time I presume the readers are curious to know what I am going to do with the old hive which has honey and brood, but no bees.

To every 4 or 5 of such hives I divide out among them a forced swarm procured at a distance of a mile or more, or I do the same with a natural swarm if I have one. They are thus left to rear their own queens on new stands, and I do not expect to get any honey from them until the fall flowers bloom. I find that it does not pay to do more with them.

In conclusion I will state that I have not made my experiments on an extensive scale, as I do not keep many colonies, but I have experimented sufficiently to convince me that the method given above is the best in this locality for honey.

Henderson, ♁ Ky.

For the American Bee Journal.

Methods of Wintering Bees.

C. W. DAYTON.

On page 151, Mr. Heddon renders a decision thus: "Our great enemy is conquered, and the wintering problem is practically solved." I would change it somewhat; it is proved that our great enemy may be avoided, but in so doing the wintering problem is impractically solved. Should Mr. Heddon succeed in wintering quite all of his colonies he will be no more successful than many of his neighbors in apiculture who winter their bees on natural stores. The winter problem has been solved to such extents as that, hundreds of times, but in a general sense it has not been very universal. It is considerably known, however, that a colony without pollen or brood and with stores of sugar syrup is not always subject to the usual amount of disease of ordinary wintering; but that that method would be safer and practical with more than a few, is another momentous question.

That cellarfuls of bees do winter well and without loss on natural stores, one winter after another, ought to be sufficient evidence to show that there must be other solutions of the winter problem, and for all we know there may be several of them. That Mr. H. has, or will, winter his bees successfully this time, probably settles the winter problem with him, so long as he can afford large expense; but the greater share of bee-keepers will go on trying again and again with natural stores, as they will be obliged to do, and some will discover, as many already have done, a safe and really practical method of wintering bees.

As I understand it, for fear the bees will freeze, Mr. Heddon maintains an even temperature of no less than 45°. That is the temperature required to winter on natural stores, but to leave the hives tightly covered, as he does, fixes the difference between life and death. Simply remove the covers and the pure natural stores are as good as syrup. There seems to be a fancied, (though ever so idle) consolation in leaving the brood-chambers tightly sealed above. If Mr. H. has conducted a thoroughly logical test in wintering bees on natural stores, I believe it has not appeared in the bee-papers.

That bees void substances of a solid nature is not an unfortunate occurrence so long as it is the effects of the watery part that kills the bees; if the cause of the liquid portion is removed there will be no liquid; consequently no disease or disorder. Where the evacuations are moderate and of a solid nature the bees do well; in fact it is nature and health themselves.

Good authority says that it is harder to sell anything after we get it than it is to produce it in the first place. If this is as true everywhere as it is in my locality it brings the cost of the said-to-be-cheap syrup up to 15 cts. per pound, if honey in the hive is worth 6 or 7 cents. It will be a fine (?) state of affairs, indeed, when every bee-keeper will be rushing his honey on glutted and "hibernating" markets early in the season, and all at once, in order to purchase, with the proceeds, winter feed for his bees; and, as will be the case, not one bee-keeper in 10 is so "fore-handed" as to be able to hold his honey and buy sugar.

While it is desirable to know how to winter bees with the least expense, we must winter them cheaply as well as successfully, because it is so easy for expense to overbalance profit.

Bradford, ☌ Iowa.

For the American Bee Journal.

South Florida for Bee-Keeping.

HARRY G. BURNET.

In answer to many who are continually writing for information, I will set forth as briefly as possible, the honey-flora of this section of Florida. By South Florida, I mean that portion of the State south of a line drawn eastward from Tampa. Monroe county is the southernmost county in Florida. Alva is situated in the northern part of the county, on the lovely Caloosahatchee river, 35 miles in an air-line from the Gulf-coast. This as to location.

As to the honey-flow: We call about Dec. 1st the opening of the "season," as that is the time when the *penny-royal*, (*Saturia Rigida*), not the penny-royal of the North, opens its diminutive blossoms to the impatient bees. This plant is found growing on the second-class pine and "scrub" lands. All through the Manatee, Brevard and Monroe counties, and during the season of bloom, the whole country is scented with its minty odor. There are thousands and tens of thousands of acres of this bloom going to waste in South Florida every year. The period of bloom extends from about Dec. 1 to Apr. 1, or a little later; but about that time the saw-palmetto opens its creamy blossoms in countless millions, and the bees desert the stronger flavored penny-royal, for the milder flavored, golden-tinted nectar it affords so bountifully.

The bees work on the saw-palmetto, (*Sabal Serrulata*) until about June 1 to June 15, when they take a vacation until the advent of the bloom among the broad leaves of the tall cabbage palms (*Sabal Palmetto*), about July 15. Very little surplus is gathered from this source as a general thing, on account of its blooming in the rainy season; but if the weather is propitious, they will do well. This bloom lasts only about two weeks.

There are many other flowers that yield honey here, but not enough to afford surplus. Feeding is unknown. On the coast they have the much-talked-of black mangrove, but mosquitoes and sand-flies are such pests as to make life a burden.

As to quality of our honey: That from penny-royal is light-colored and heavy—13 to 13½ lbs. to the gallon; but it has too much of the penny-royal flavor to suit *my* taste. The honey from the saw-palmetto is delicious in flavor, light golden in color, and fully as heavy as the penny-royal honey. That from the cabbage palm is also of fine flavor, color and weight.

As to quantity: I will "draw it mild" and say that we get about 200 lbs. per colony per year, and an increase of one. This will seem—and is—a large yield. I cannot be very definite, as I have not kept weight before, but will do so this season and report accordingly. Comb honey does not pay and is not produced. There is room for many bee-keepers here, but to those desiring to come, I would say, come first, look around, and see how you like it—do not decide hastily.

Alva, ♀ Fla.

For the American Bee Journal.

The Kretchmer Alternating Hive.

E. KRETCHMER.

DEAR EDITOR:—I send you one of my alternating brood-chamber sections for bee-hives (half-width), with bottom and honey-board all made as described in the patent, with letters of reference from the drawings marked thereon. Please examine it and compare it with the patent, and you will find that Mr. Heddon errs in some of his assertions made on page 213. You will find that it has *not* and never had a "fast bottom," and that it *is* "capable of being inverted," although it never was made with that purpose in view; and in justice to Mr. Heddon I will say that I do not know of its being used in an inverted position.

By referring to my article on page 185, it will be seen that I gave it as a scrap of history, and with no desire to wrong Mr. Heddon; it will further be found that I described the sectional brood-chamber idea as *old* and not as patented by me. I simply arranged such sectional brood-chambers with a series of frames clamped within such a chamber with a wedge; standing on a metal strip, the brood-chambers standing on cleats raised above the face of the bottom, as described in my catalogue issued in January, 1884; and above the brood-frames a honey-board with bars arranged for intermediate passage-ways described in the specification of my patent. Then who would not say, when a hive is named with the same arrangements, that such arrangements are not new?

Since then I have carefully examined Mr. Heddon's hive, and the *special* system for which it was constructed; and since Mr. Heddon admits as old the "double brood-chamber" device, unless made in the particular manner in which he makes them, I most cheerfully admit, with all due honor to Mr. Heddon, that many of the various combinations *are new*, when applied to that system of management and manipulations laid down in his book; and since reading his patent I believe that the *claims* and combinations in it are valid.

Coburg, ♀ Iowa.

[See Editorial remarks on the above, on page 259.—ED.]

For the American Bee Journal.

Honey-Plants for Bees.

J. H. ANDRE.

The honey-producing plants here in a good season are so various that they furnish honey the entire season; consequently, when I first began to read the BEE JOURNAL, it seemed strange to me to see mention of a honey-drouth in some localities in mid-summer.

The first to furnish food for the bees here are the common creek willow, alder, skunk cabbage, and poplar, all of which blossom at about the same time. Next is soft maple, then trailing arbutus, which I think furnishes the first honey, and although it is not very plentiful, and its tiny blossoms can secrete but little honey, its extra good quality, and closeness to the ground enables bees to work upon it in windy weather; and according to its size, etc., it is a valuable plant. Dandelion comes next. Last season it furnished food for the bees for over one month continuously. I do not see how it could very well be spared. White clover is next and in a good season it lasts from May 20 until late in October, but if a drouth comes in the last of May, and the season continues dry, it secretes but little honey. The wild red-raspberry then blooms and is far the best of all honey-plants known. It never fails to secrete honey wherever we have plants, but as yet none are cultivated here, and our main dependence is upon the forest fires to start a new crop of plants. There is sometimes a scarcity, but never a complete failure of this plant. I believe that if cultivated plants furnish the same amount of honey accordingly as wild ones, it would pay to plant ¼ of an acre for each 10 colonies of bees, even if it did not fruit at all.

Honey-locust secretes well, but only a few trees are grown. Red clover, (the large variety), sometimes furnishes an abundance, but it is only once in a great many years that the bees can reach it to gather any amount. The season must be a continuously wet one to make it of any profit. The year 1865 was a season of plentiful showers,, so much so that few plants furnished any honey except white and red clover and buckwheat, and yet it was a first-class honey season. The latter is somewhat uncertain; it seems to do best if there is scarcely any rain, or just a few slight showers, while in blossom with heavy dews. Old field balsam, or moonlight, as it is sometimes called, is one of our best fall pollen plants. Fireweed is one of our late honey-plants. Some seasons I have known surplus stored from it nearly through October. Another plant called Indian pink, (I suppose that is only a local name), sometimes late and sometimes early, is a plant that secretes much honey. I believe that bees will go farther to work upon this plant than any other plant known here. I cannot speak positively in regard to the quality of honey gathered from it, but from the very offensive odor of the plant I would not care to take that kind of honey as a choice. Sumac honey I do not fancy either, at least that which is gathered here, but as it blossoms just about the right time for young swarms of bees to get pollen with which to rear brood, and in great plenty at a time of the season when other sources are scarce, it is a great help in that particular. In addition we have corn, heart's-ease, goldenrod and dozens of others of minor importance.

In regard to the nearness that apiaries may be to each other with profit, I would say that in all of my bee-hunting experience I have never caught bees at work on the flowers but little if any over 1 mile from the colony. As this is the only way to get anything like facts in regard to the matter, it would seem safe to locate apiaries within 2½ miles of each other. Bees that are forced to go a distance of 2 miles for honey will be of very little profit to their owners as it takes so much time to go and come, and they are more apt to be caught in heavy showers, during which, and if towards evening the weather turns cold, many die on the way, thus keeping the colony thinly populated in spite of brood-rearing. I have timed bees many a time when working on syrup, and it takes them from 10 to 15 minutes to make a trip of half a mile; add to this 5 minutes more when working on the flowers, and 20 more for a distance of 5 miles, (for no heavily laden bee can fly 2 miles without stopping to rest on the way), and it is self-evident that not much surplus will be stored if the bees have to go a distance of 2 miles for honey. I have known of hundreds of bee-trees being found and not one in twenty were "lined" ¾ of a mile. In all of my experience I have only once "lined" bees a distance of a mile.

Lockwood, N. Y.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
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Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for a year and the Guide Book will both be sent for $1.30.

Convention Notices.

☞ The annual meeting of the Northern Ohio Bee-Keepers' Association will be held in the New Town Hall at Wellington, O., on Friday, April 30, 1886. All are invited to come and help make the meeting both pleasant and profitable. A special invitation is extended to the ladies. The officers of the Association will be elected at this meeting.

H. R. BOARDMAN, *Sec.*

☞ The next meeting of the Linwood Bee-Keepers' Association will be held in Condit's Hall at Rock Elm, Wis., on Saturday, May 1, 1886, at 1 p.m. All interested in bee-keeping are cordially invited to attend and make this a profitable meeting.

B. J. THOMPSON, *Sec.*

☞ Tho Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.

B. F. CARROLL, *Sec.*

☞ The next annual meeting of the Western N. Y. and Northern Pa. Bee-Keepers' Association will be held at Randolph, N. Y., on May 4, 1886.

A. D. JACOBS, *Sec.*

☞ The DesMoines Co. Bee-Keepers' Association will meet at the Court House in Burlington, Iowa, on Tuesday, Apr. 27, 1886, at 10 a.m. Any articles sent to the President, Mr. Geo. Bischoff, at Burlington, for exhibition, will be well cared for and returned or sold, as the sender may direct. A cordial invitation is extended to all interested in bee-keeping.

JOHN NAU, *Sec.*

☞ The semi-annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall, N. W Corner of Main and 11th Sts., (entrance on 11th St.), at Kansas City, Mo., on Apr. 29 and 30, 1886. The Cable Line can be taken from the Union Depot for 9th and Main Sts. The following essays will be read: "The Honey Market," by Clemens, Cloon & Co.; "Bee-Keeping in Iowa," by E. Kretchmer; "Best method of handling bees for comb honey," by A. A. Baldwin; "Missouri Bee-Keeping," by J. D. Pearce; "Does bee-keeping pay as a pursuit?" by Jos. Nysewander; and "Invertible Frames and Hives," by J. M. Shuck.

P BALDWIN, *Sec.*

☞ The next meeting of the Cortland Union Bee-Keepers' Association will be held at Cortland, N. Y., on May 11, 1886, at 10 a.m.

D. F. SHATTUCK, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

☞ The Central Michigan Bee-Keepers' Association will meet on May 18, 1886, with Capital Grange at their Hall in North Lansing, Mich., to hold 3 sessions, viz: Forenoon, afternoon and evening. All interested in bee-culture are invited to attend and bring articles of the apiary for exhibition. For any special information address the Secretary,

E. W. WOOD, N. Lansing, Mich.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Local Convention Directory.

1886. *Time and place of Meeting.*

Apr. 29, 30.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Apr. 30.—Northern Ohio, at Wellington, O.
H. R. Boardman, Sec., E. Townsend, O.

May 1.—Linwood, at Rock Elm, Wis.
B. J. Thompson, Sec.

May 4.—W. N. Y. and N. Pa., at Randolph, N. Y.
A. D. Jacobs, Sec., Jamestown, N. Y.

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

May 11.—Cortland Union, at Cortland, N. Y.
D. F. Shattuck, Sec., Homer, N. Y.

May 18.—Central Michigan, at N. Lansing, Mich.
E. W. Wood, Sec., N. Lansing, Mich.

May 20.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Clean and Healthy Bees.—Wm. G. Gosney, De Mossville, ♂ Ky., on April 10, 1886, says:

In November, 1884, I packed 75 colonies of bees in fine condition. In the spring of 1885 I sold one colony, burned one, and had 50 left. In November, 1885, I packed 59 colonies, and I now have 52 in moderate condition. I took 40 pounds of comb honey last year, and now I will have to feed about 20 colonies. My bees are clean and healthy, and I hope never to meet another year like the last.

Good Results.—L. J. Diehl, Butler, ♂ Ind., on April 15, 1886, writes:

I have some of the strongest colonies that I ever had come through the winter, after being housed up in the cellar for over 4 months. I commenced the season of 1885 with 61 strong colonies, increased them by natural swarming to 216, all strong, and hives well filled up with honey; besides, they gave me over 2,600 pounds of surplus all in one-pound sections—the finest lot of honey I have ever taken. I do think I can realize more profit on bees than I can on the same amount of capital invested in any other pursuit that I ever have tried.

Encouraging Prospects.—Mr. E. Henkle, Washington, C. H., ♀ O., on April 20, 1886, writes:

I started in the winter with 35 colonies, all packed on the summer stands with chaff and leaf cushions. I now have 31 colonies, having lost 4 weak colonies that ought to have been doubled up last fall. I have never had bees come through the winter so strong and bright as they have the past winter. There are no signs of diarrhea. Last spring I lost 18 colonies out of 52 with the diarrhea. I feel very much encouraged for the prospect this season. The cherry and plum trees are now in full bloom, and apple bloom will be out in a few days. The weather is fine, and the bees are working from daylight till dark, and young brood is hatching very fast. I do not see that the snow-storm that we had the first six days of April injured the bees any. I feel now that we are going to have early swarms this year, and I look for a good crop of honey, as white clover looks very fine. I have 11 acres of Alsike clover close to my apiary. If I only can do as well as that man who reported in the Bee Journal, 2 or 3 months ago, about getting 15 barrels of honey, last year, from 31 colonies, I would surely feel myself able to take the Bee Journal another year! I have exactly the number, so now look out for the result!

Stark Co., O., Convention.—Mark Thomson, Sec., Canton, ♂ O., on April 15, 1886, writes:

The bee-keepers of Stark and adjoining counties met in Grange Hall at Canton, O., on April 13, 1886, and organized the "Stark County Bee-Keepers' Society." A very pleasant and profitable meeting was held, and there are prospects of great good being done to our pursuit through the instrumentality of this Society. The next meeting occurs on the last Tuesday in August, 1886.

Late and Cold Spring.—J. C. Wilson, Ridgeland, ♀ S. C., on April 10, 1886, says:

My bees are a month behind. Last year I had my first swarm on March 8; this year my first swarm is recorded "April 9." Unprecedented cold winter and a late spring has reduced strong colonies almost to nothing. I feel very much disappointed at my prospect being blighted. Last year I produced 825 pounds of honey from 12 colonies, and as I was this year one year older, and therefore the better prepared both in knowledge and apiarian appliances, I had hoped to do much better. But nothing daunted by the bad prospect, I shall push forward with the hope of a reasonable success.

Bee-Keeping in Ontario.—R. F. Holtermann, Brantford, Ont., writes:

Having delightful weather for bees, and noticing to-day that maple is in bloom, it will not be considered altogether premature or valueless to give a brief report of the general condition of our bees. I have the reports of at least 10 bee-men possessing over 100 colonies, in different parts of Ontario, and they all report bees in excellent condition, and several without any loss. Then I have reports from a great many possessing from a few colonies up to 100, and the percentage of loss is very small, and the general condition excellent. The mercury has fallen fully as low as last year, although if I mistake not the duration of severe weather was shorter. In parts of Ontario bees wintered outside have had one or two cleansing flights. I should very much like to see a report of the relative degree of humidity for a number of years, and this report connected with the general condition of bees in the spring. I should be very much surprised if Mr. W. H. Tuttle's 2 colonies, mentioned on page 234, as having drones, were not queenless; that is, if they were at home when seen, which is probable. In reply to Mr. A. C. Fassett's question on page 235, I would say that every one would be inclined to come to the conclusion that they were starving. I have seen colonies starved for foul brood act in that dormant manner and revived by such feeding. It is the very last stage before death, and although a higher temperature may in a measure temporarily revive them,—food only can save them from death.

Successful Wintering.—J. P. Hensley, Grand Island, ⊙ Nebr., on April 15, 1886, writes:

I began in 1885 with 1 colony, increased it to 4 last season, and last fall I contracted them to 6 frames each. They were partly filled with natural stores, and I gave them the balance in sugar syrup, and all was nicely capped by Dec. 26. I then packed them on the summer stands in dry oats chaff, 6 inches deep all around, bottom, sides and ends. I unpacked them to-day, when, lo and behold, I found them with over half the stores that they began the winter with, and I think as strong as most of the colonies usually are. I think that I hit upon the right way to winter bees. Take care that they are properly packed, and have plenty to live on, notwithstanding the pollen theory, and I see no reason why we should have very heavy losses. It has been very cold here, and raining almost every night this month, but to-day it seems as if spring had come to stay.

Expecting Early Swarms.—6—J. W. Buchanan & Bro., (25—16), Eldora, ⊙ Iowa, on April 20, 1886, write:

Bees in this locality have wintered very well, where they were in good cellars. Those wintered outside, or in cold cellars, have not done so well. Out of 20 colonies in the cellar we lost 7, and 2 out of 5 on the summer stands, packed in chaff. Our cellar was divided into two apartments—one for the bees and the other for vegetables. Part of the bee-cellar was under the sitting-room, and part under a bed-room. The end of the cellar under the bed-room was too cold. The bees ate more honey, and some of them run out of stores and starved. Six out of the 7 that died were in the cold part of the cellar. The seventh colony died with diarrhea, leaving plenty of honey in the hive. We have 14 splendid colonies, and 2 weak ones. They are very busy now carrying in honey and pollen. Soft maple is in bloom, and is the best we have ever seen it. Box-elder will be in bloom in a few days. Colonies are very strong, and we look for early swarms.

Strong Colonies. — Esau Russell, Tiffin,⊶ Iowa, on April 18, 1886, writes:

I put my 40 colonies of bees into the cellar on Dec. 5, and took them out on April 8 and 9. Every colony was living and was extra strong. They commenced to carry in pollen immediately, but would not take to meal. They seem to have plenty of natural pollen. The colonies are stronger than I ever saw any in the spring. My cellar is not walled, and I have never found but one dead colony in it since I have kept bees.

House Wintering of Bees. — W. Mason, Fillmore,⊷ Ind., on April 16, 1886, says:

My bees had a few days about March 18 for a flight, and took in some pollen and stores fed them. I carried my bees to their summer stands on March 10. I have rather weak colonies, 2 being queenless. I had lost 3 before my last report, but I have 26 that are very strong in bees and brood. I like the house-wintering, but there is something to be learned from experience to make it a success. Being at Greencastle, on April 14, I visited Mr. A. O. White's apiary; we examined his bees, and found them in fine condition, 4 being a little short of stores and being fed; one we noticed in particular was very full of brood, with a fine lot of young drones, and almost ready to swarm. The most of his bees were wintered in the cellar. He will try it again.

Profitable Experience with Bees.—Mrs. J. F. Upton, Bath,♀ Maine, on April 18, 1886, writes:

I had 3 colonies of bees a year ago in March, which I had wintered in the cellar. I moved 3 miles on March 10, so the bees had to be put out at that time after going so far. I lost a good many in the light snow on their first flight, still they did well, and each colony swarmed in June. I gave away one swarm, leaving five from which I got 175 pounds of honey; 95 pounds I sold at the house at 25 cents a pound; 40 pounds I gave to friends, and I have now on hand 40 pounds more. All of it was in two-pound boxes, but as nearly every one wanted one-pound boxes, I shall not use any more two-pound boxes. I wintered 4 colonies safely, as the fifth, being in very poor condition in the fall, died; but as they were nearly all drones, and were in a "Cotton" hive I was glad of it, as I wished to get rid of that kind of hive. My cellar was so warm, and the bees so uneasy, that I put them on the summer stands early in March. On April 16 I sold a colony for $10, and have two more engaged as soon as they swarm. I like to keep bees, though they sting me often and poison me very badly. I think they have paid their way though; but of course I am not making a fortune at the business. My expenses have been light, so there has been some profit.

Good Prospects.—W. Frank Storm, Lexington,⊙ Ky., on April 18, 1886, says:

The loss of bees in this part of Kentucky is fully one-half. There has been almost a clean sweep among the bees of box-hive bee-keepers, but our propects for a crop of clover honey is good.

Bees in their Glory.—S. L. Sherman, Oskaloosa,♀ Iowa, on April 20, 1886, writes:

The weather here for the past two weeks has been warm, and the bees are in their glory. I have now 84 colonies out of 86, fall count. The last 2 or 3 mornings the bees have just been a-booming from before sunup till about 9 a.m.; then again from about sundown till darkness puts a stop to operations. Can they be working on honey-dew? They come in heavily laden, but have no pollen on their legs. The blossoms on the box-elder are the only bloom I can see the bees at work on. Currant and gooseberry are just beginning to bloom. Everything is favorable for a good honey-season.

P. S.—I have just been out examining the bees, and I find them at work on the soft maple and cotton-wood, which are just coming into leaf, the blossoms having fallen off. I expected to have to feed some, but if this flow continues a few days more I will have to extract.

When to Put a Section-Case On.—John W. Brockenbrough, Coffee,⊙ Va., on April 14, 1886, asks:

I had much trouble with my bees sticking the top of the hive to the frames, when I took the section-case off for the winter; and now, when should I put the section-case on? They also stick the section-case to the frames. Please let me know what I can do to keep them from doing so. I use the Langstroth hive with the Heddon section-case.

[Put on the cases when the honey-flow begins. To prevent the brace-comb trouble you mention, use the skeleton, zinc, break-joint honey-board, and proper bee-spaces, a scant ⅜ inch.—JAMES HEDDON.]

Bees and Grapes.—H. Sontag, Cucamonga,⊸ Calif., writes:

I have a vineyard about one mile distant from my apiary, sustaining much loss by ground-squirrels and quails, but I had a notable experience last year about the damage it is said that bees do to the grapes. I usually dry my raisin-grapes in the apiary or by the side of it. I expected a heavy loss of raisins by the bees last season, as it was a dry one; but I saw less bees working on the grapes than any previous year. The reason was, that I do not remember of seeing one yellow jacket. These and the quails puncture the berries first, and then the bees of course suck them after that, but not before, as bees are not able to cut the skin of grapes, because their mandibles work like scissors, not like a gimlet or a knife. That is the reason that they are able to cut paper, cloth, etc.

Killing the Young Bees.—Thos. J. Bell, Opelousas,⊙ La., on April 26, 1886, writes:

I have one colony of bees that I cannot tell what is the matter with them. The old bees are killing the young bees, or pulling them out of the hive. They drop on the ground and are unable to fly. The bees of the colony are pure yellow Italians, with a large, beautiful, and very prolific Italian queen. There is plenty of pollen, and the bees are storing honey, and as it is the only colony so affected in the apiary of 100 colonies, I do not know what to make of it. Does any one know why they should kill the young bees?

Not One Colony Lost.—D. D. Herrick, Libertyville,δ Ills., on April 18, 1886, writes:

I carried my 13 colonies of bees into the cellar on Dec. 15, 1885, and left them until March 15, when I took them out for 3 days, and then put them back until April 15. When put out again they carried in pollen in less than an hour. I never have seen colonies stronger or better, and I did not lose one.

Half Bee-Spaces.—M. M. Baldridge, St. Charles,δ Ills., writes as follows:

It is said by some that there is nothing *new* about the Heddon hive. This may be true, but as yet I have seen nothing *in print* to convince me that Mr. Heddon is not the first and original inventor of the half bee-space over and under the brood-frames, or over and under the wide-frames for sections; or the full bee-space over and under the brood-frames, and wide-frames for sections, when secured at will, as described by Mr. H., and when used for the purposes set forth by him. As Mr. H. does not claim a hive made simply of two or more stories, unless provided with a half bee-space over and under the frames, or with a full bee-space over or under the same at will, bee-writers are surely wasting time and space in describing old hives, having two or more stories, that never had these *new* features. "Honor to whom honor is due," should be the motto of everybody.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19⅜x14½—Price 25 cents each.

◆

There will be a Rush for supplies needed in the apiary after awhile, and we cannot do better than to urge all to look over their stock, ascertain what will be needed, and get it on hand before it is necessary for use—thus avoiding the perplexity consequent upon its possible delay in reaching them in time.

◆

Alsike Clover Seed.—We can furnish Alsike Clover Seed at **$8.50** per bushel—or **$2.25** per peck. These prices will take the place of those published in our Catalogue, until further notice.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 26, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2lb. sections, 9@12c.

BEESWAX.—23@24c. per lb. Not much offered.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 20@23c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ apvance on above prices. Extracted in barrels, 5@5½.

BEESWAX.—Firm at 21¼c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.

BEESWAX.—Scarce at 25c.

A. C. KENDEL. 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted, 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & Co., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—This market is very poorly supplied with honey of any kind just now, and comb honey in 1-lb. sectons, and extracted in barrels or kegs, is not equal to the demand. We quote: Choice white 1-lb. sections, 16@18c. White extracted in kegs or barrels, 7½@8½c.; dark, in same, 6@7c.

BEESWAX.—Scarce at 25@26c.

A. V. BISHOP, 142 W. Water St.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

◆

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages)..............$1 00
" 100 colonies (220 pages)............ 1 25
" 200 colonies (420 pages)............. 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office, or we will send them all to the agent.

◆

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

Advertisements.

FOR SALE.—Best Brood Foundation at 40 cts.; Light, 50 cts. Samples free. Also Sections, Smokers, etc.—GUST. PROCHNOW, Mayville, Wis.
17A4t

FOR SALE.—100 Colonies Italian Bees and **200** Tested and Untested Queens.
17A4t **E. BURKE,** VINCENNES, IND.

BEES FOR SALE.—20 Colonies of Italian Bees in Simplicity hives with reversible frames, at **$3.00** each. Also Bees by the pound.

G. HILLJE,
17A2t SCHULENBURG, TEXAS.

IF YOU WANT a good, well-made, durable and practical Machine, send for the

I. X. L. HONEY-EXTRACTOR.

For 2 Langstroth or square frames, only $6.50. Other sizes in proportion. Excelsior Cold-Blast Smoker, postpaid, 75 cts. W. C. R. KEMP,
17A4t ORLEANS, IND.

STRAWBERRIES. Send as many stamps to C. WECKESSER, Marshallville, O., as you want plants for, and see what a nice collection he will send you. State what varieties you have and prefer. BEES & QUEENS Cheap! Send for Circular.
17A2t

Doolittle's Queens.

For Prices, &c., see page 221.
17Atf

DO YOU EAT CANDY?

SEND $1.25 and I will express 5 lb. Todd's Honey Candles, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's New Book mailed free for $2.50. **ARTHUR TODD,**
1910 Germantown Ave., PHILADELPHIA, PA.
17A9t

White Poplar Sections

We make the finest Honey-Sections in the World and make no exceptions. G. M. Doolittle says: "The last sections are just complete." James Heddon—"They excel *everything* in the line of perfect workmanship." Prof. N. W. McLain—"The sections excel anything I have seen heretofore." J. B. Mason—"Have received samples from all manufacturers who advertise in the bee-papers. I must say this is by far the nicest section I have ever seen." Jno. L. Janeway—"They seem perfection itself so far as human workmanship can go." Sample for 2-cent stamp. Price-List of Sections, Hives, Syrio-Albino Queens and Bees, and other Apiarian Supplies, free.

Address, **DR. G. L. TINKER,**
3Dtf NEW PHILADELPHIA, OHIO.

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.**, a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,

J. P. H. BROWN.
7D10t AUGUSTA, GEORGIA.

---

200 **COLONIES** of Choice Italian Bees for Sale. For terms, adddess
W. J. DAVIS. (box 148),
13W9t YOUNGSVILLE, PA.

BEE Hives and Sections —Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

---

20 SIMPLICITY Hives with Italian Bees, bred 10 years from Imported mothers, at $6.00.
15W3t A. L. GOULD, Ridgeville, Iroq. Co., Ills.

READY to SHIP.—68,000 Langstroth Brood-Frames, prepared to nail, at 90 cts. per 100; $4.00 per 500. For description send to,
C. W. DAYTON,
7Dtf BRADFORD, IOWA.

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses.
H. H. BROWN,
15Dtf LIGHT STREET, Columbia Co., PA.

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece, V-Groove, $4 per 1000 Less for lots of 10,000 and Price-List.	40c per lb. for heavy. 50c " " light. Send for Samples

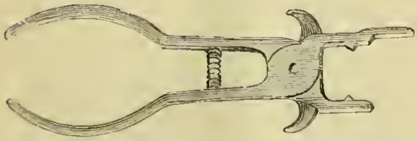
A. F. STAUFFER & CO.,
15D2t STERLING, ILLS.

DUNHAM AND VANDERVORT FOUNDATION.

WE have a large stock of choice yellow beeswax, and can furnish Dunham comb foundation for brood-comb, cut to any size for 40c. per lb. Extra thin Vandervort foundation, 46c. per lb. We guarantee our foundation to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20 cts. per lb. for sections.

F. W. HOLMES,
9Dtf COOPERSVILLE, Ottawa Co., MICH.

JONES' FRAME-PLYERS.



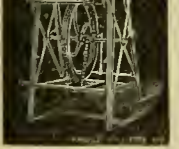
FOR taking frames out of hives, or moving them in any way desired. It is made of galvanized iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Plyers. Price, **40** cts., by mail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Queens. ITALIAN. Queens.

REARED from Imported Mothers. Two, 3, and 4 Frame Nuclei. Safe arrival and satisfaction guaranteed. Send for price-list. Address,
15D2t FRANK A. EATON, Bluffton, Ohio.

BARNES' FOOT-POWER MACHINERY.

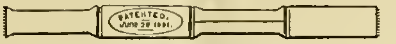


Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of beehives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 484 Ruby St., Rockford, Ill.

Prices Reduced.

THE "BOSS" ONE-PIECE

SECTIONS.


PATENTED June 28 1881.

Patented June 28, 1881.

WE have REDUCED the PRICES on One-Piece Sections as follows:

One-Pound Sections, In lots of 500 to 3,000, ₱ 1,000, **$4.00**

For larger orders write for prices.

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., April 15, 1886.

Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

RAYS OF LIGHT, the original Bee and Poultry Journal. Published in the interest of Bee-Keeping and Poultry Raising. J. J. MARTIN & CO., Publishers, North Manchester, Ind. Sample copy FREE. Subscription price **50 cents** *per year.* 11D8t

---

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS of the **BRISTOL Bee-Hive**, the Standard Hive of Vermont, **Section Honey-Boxes**, all sizes, made from White Poplar, (the best timber in the world for honey-boxes), 1-pound boxes a specialty. Clamps, Separators and Wood Sides. Lightning **Gluers**, Shipping **Crates**, Bee Escapes, Bee Feeders, and Manum's Bee Smokers—all made of the best material and in a workmanlike manner. Send stamp for illustrated Catalogue and Price-List. 46D12t

---

FOR SALE.

Italian Queens.

	May.	Jun.	After
Untested,	$1.00	$1.00	.85
Six,		5.00	4.50
Tested,	2.50	2.00	1.50
2-fr. Nuclei—untested queen,	3 00	2.75	2.25

Also Bee-Hives, Foundation, etc. Send for Price List. **JNO. NEBEL & SON,**
13D6t HIGH HILL, Mont. Co., MO.

BEAUTIFUL

FOUNDATION and very choice all-in-one-piece SECTIONS, V-groove—Wholesale and Retail, and exceedingly cheap. Send for samples and Free Price-List of everything needed in the apiary.

M. H. HUNT, Bell Branch,
13Dtf (Near Detroit), Wayne Co., MICH.

1869. UP WITH THE TIMES. 1886

Armstrong's Perfection

CROWN HIVE

The brood-frames, honey-rack, and section-boxes are all **Reversible.**

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use. Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.

1886. ITALIAN QUEENS. 1886.

FROM APRIL UNTIL OCTOBER.

UNTESTED, $1.00, per Dozen $8.00. Reared from Imported Mothers. Money refunded if not furnished promptly. Address,

WALTER McWILLIAMS,
9D6t GRIFFIN, GEORGIA.

---

200 Colonies Italian & Hybrid Bees

FOR SALE,

IN 9 and 10 frame hives, all strong and healthy, wintered in the cellar. Will deliver them aboard of cars—for Italians, **$8.50**; Hybrids at **$7.50.** Will guarantee as represented, or money refunded. **Italian Queens**—Untested, $1.00; Tested, $2.50. Send money by P. O. Order or Registered Letter.
18W8t **L. J. DIEHL,** BUTLER, IND.

COMB FOUNDATION!

Reduced 5 Cents per pound.

UNTIL Further Notice, we will sell brood foundation at **40 cents** per lb., and **thin**, for surplus honey, at **50 cents** per pound. This reduction from the prices quoted in our Price Lists for 1886, is made on account of the decline in the price of Beeswax.

CHAS, DADANT & SON, Hamilton, Ill.
THOS. G. NEWMAN & SON, Chicago, Ill.

LOOK! LOOK!

ALL-WOOD Langstroth Frames, same as A. I. Root's make, $1.50 per 100; $12.50 per 1,000. Comb Foundation, made on latest improved Mill. Heavy, in 10 or 20 lb. box, 40 cts. per lb.; Thin, 45c. Simplicity Hives, Sections, Smokers, and Supplies generally. **Pure Italian Bees and Queens** a specialty. Circular and Price-List free.

C. M. DIXON,
16W4t PARRISH, Franklin Co., ILLS.

PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
11Atf O. CLUTE, **Iowa City, Iowa.**

TESTED ITALIAN QUEENS, $2.25. Untested, $1.25. After May 15, 25 cents less. Bees, $1.00 per lb. MISS A. M. TAYLOR,
18W2t Mulberry Grove, Bond Co., Ills.

A YEAR AMONG THE BEES,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

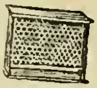
BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 140 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEES, QUEENS,

AND

APIARIAN SUPPLIES.

First-Class Goods at Low Prices.

A FINE LOT OF ITALIAN BEES For Sale Cheap.

Send Postal Card for Illustrated Circular and Price-List.

J. C. SAYLES.
13Dtf HARTFORD, WIS.

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO ILL.

REDUCED PRICES ON SUPPLIES.

One-pound Sections, $4.00 per 1,000. Two-pounds, $4.50 per 1,000.
Langstroth Frames, ready to nail, per hundred, $1.25.
Comb Foundation is subject to a discount of 5 per cent. until May 1.
Glass, 5x6, per box of 240 lights, reduced to $2.50.

Standard and Improved Langstroth Hives, cut and ready to nail, are reduced from 5 to 30 cents per hive, as will be noticed in the following table of **New Prices:**

STANDARD LANGSTROTH HIVES (14x18⅜ inches inside).

Quantity. Numbers	1	2	3	4	5	6	7	8	9	10
5 hives, or more, each	.90	$1.25	$1.60	$1.45	$1.75	$1.20	$1.70	$2.00	$1.30	$1.30
10 hives, or more, each	.88	1.23	1.58	1.43	1.73	1.18	1.68	1.98	1.28	1.28
25 hives, or more, each	.85	1.20	1.55	1.40	1.70	1.15	1.65	1.95	1.25	1.25
50 hives, or more, each	.80	1.15	1.50	1.35	1.65	1.10	1.60	1.90	1.20	1.20
100 hives, or more, each	.75	1.10	1.45	1.30	1.60	1.05	1.55	1.85	1.15	1.15

IMPROVED LANGSTROTH HIVES—With Manipulating Side.

Quantity. Numbers	1	2	3	4	5	6	7	8	9	10
5 hives, or more, ea.	$1.30	$1.65	$2.00	$1.90	$2.20	$1.65	$2.10	$2.45	$1.65	$1.65
10 hives, or more, ea.	1.28	1.63	1.98	1.88	2.18	1.63	2.08	2.43	1.63	1.63
25 hives, or more, ea.	1.25	1.60	1.95	1.85	2.15	1.60	2.05	2.40	1.60	1.60
50 hives, or more, ea.	1.20	1.55	1.90	1.80	2.10	1.55	2.00	2.35	1.55	1.55
100 hives, or more, ea.	1.15	1.50	1.85	1.75	2.05	1.50	1.95	2.30	1.50	1.50

For description and prices of these hives nailed, we refer our customers to our Catalogue for 1886, pages 4 & 5. These prices for material in the flat, take the place of those on p. 6.

THOS. G. NEWMAN & SON, 923 & 925 West Madison St., CHICAGO, ILL.

Given's Foundation Press

THE GIVEN PRESS stands in the **front rank** for manufacturing **FOUNDATION in Wired Frames,** as well as foundation for **SECTIONS.** Without a dissenting voice, all of our customers affirm its superiority.

Send for Circular and Samples.

J. R. CALDWELL & CO.,
1Atf HOOPESTON, Vermillion Co., ILL.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH ANE MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The British Bee Journal is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the American Bee Journal, one year, for $3.50.

THE AMERICAN APICULTURIST

(ESTABLISHED IN 1883.)

WILL be mailed to any address for 3 months, on receipt of 25 cts. in stamps. **Sample copies free.** Address,
12Atf AM. APICULTURIST, Wenham, Mass.

Lewis' V-Groove One-Piece

SECTIONS.

Down, Down, Goes the Price!

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G. B. LEWIS & CO.,
WATERTOWN, WIS.
April 15, 1886. 16Wtf

40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. **Circular Free. T. L. VonDorn,** *Omaha, Neb.* **None Better**
12Atf

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

SOLD!

HAVING Sold the 100 Colonies of Bees offered in the March Numbers of this JOURNAL, I am now booking orders for **Nuclei Colonies and Queens Only.** Also **Bee-Keepers' Supplies.** Send for 1886 Price-List. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
14Wtf COLERAINE, MASS.

Bee-Keepers' Supplies,

OF ALL KINDS,

Sections & Comb Foundation

A SPECIALTY.

125 colonies of Bees for sale

in Quinby frames, mostly Italians.

☞ These Bees will be SOLD CHEAP. Send for prices. Also, for Illustrated Price-List.

W. E. CLARK, successor to L. C. Root,
11A13t ORISKANY, Oneida County, N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

LARGE SALES—SMALL PROFITS.

THE 3rd Edition of "Handy-Book and Queen-Rearing," 300 pages, 100 illustrations, bound in cloth, by mail, ... $1 10
Book and sample latest improved Drone and Queen Trap, by mail, ... 1 50
Book and tested queen, any race (from June to October) 2 00
Book and warranted queen, ditto, ditto 1 75

Money Order office at Salem, Mass. Postage stamps will do for odd change. Send for Circulars.

12Atf **Henry Alley, Wenham, Mass.**

Sections and Berry-Baskets.

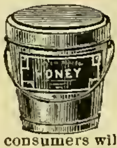
WE, the *original inventors* of the one-piece sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms.

M. & H. F. COFFIN,
13W13t MILTON, Trimble Co., KY.

60 Colonies of Bees For Sale.

FOR particulars, call on or address,
A. L. EDWARDS, Skaneateles, N. Y.
13Wtf

NEW ONE-POUND HONEY PAIL.



THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

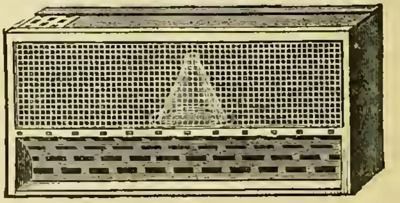
DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
14Wtf **MAZEPPA, MINN.**

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

FREE A book of 160 pages on **LOVE** & Courtship, sent free by the Union Pub. Co., Newark, N. J. Send 5c. for postage.
11A8t

TWO-POUND

SECTIONS.

Job Lot—Cheap!

WE have received a Job Lot of **25,000** One-Piece Sections with square groove which we will close out at **$3.50** per 1,000, or $2.00 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1⅞ inches—narrow tops.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. May 5, 1886. No. 18.

We have Received a copy of the "Report on Agricultural Colleges and Experimental Farm Stations, with suggestions relating to experimental agriculture in Canada, by Prof. Wm. Saunders, F.R.S.C." It is quite an exhaustive report, and shows that Canada is alive to the proper means of education, in the department of agriculture.

◆

Dr. Miller's New Bee-Book is now published, and all orders already received will be filled before this paper is in the hands of its readers. A glance at the index, which covers six pages, will reveal the great number of subjects which the Doctor discusses. The book is printed on nice paper, and is bound in cloth, and makes a nice volume. It can be obtained at this office for 75 cents, postpaid.

◆

Dakota.—The second annual Territorial Fair will be held under the auspices of the Dakota Board of Agriculture, at Huron, Sept. 6 to 10, 1886. Fifteen thousand dollars in premiums will be offered ; $350 in cash for the best county exhibits. Reduced railroad rates on all railroads. Free transportation for stock and exhibits. Premium list will be ready June 1. It can be obtained of W. F. T. Bushnell, Secretary, Huron, Dak.

◆

A Success at Last, says Mrs. L. Harrison, in the *Prairie Farmer*, is the heading of a circular now upon my desk, describing a "simple device, which is a complete protection to bees against the ravages of the bee-moth. It is a simple attachment to the platforms upon which the hives rest."...I cannot recommend this wonderful piece of mechanism, which is furnished with a tank of water to drown the millers in, but I can put in a word for a trap that I have used for years with success, and is not patented. It is called the Italian Bee. A tea-cupful of them will protect the combs in a hive. The honey produced by these bees seldom becomes infested with their moth, after it is removed from the hive. I should forget these pests entirely if I was not reminded of their presence by the patent catchers.

The First of May.—Mr. W. J. Cullinan, Mt. Sterling, Ills., send us the following, on the "May Day" :

The oriole is carroling
  Its sweetest songs to-day,
The blue-bird in the elm-tree
  Now trills its softest lay.

The partridge drums, perched on the fence,
  In solemn cadence low ;
The BEES are busy 'mong the flow'rs,
  A-humming to and fro.

The lambs are sporting merrily
  On yonder hill-slope there,
While flights of songsters, cheerily
  Sing, gamb'ling through the air !

Sounds like these one loves to hear,
  They fill the soul with mirth ;
They drive away dull thoughts of care—
  Their glory is their worth.

But the sweetest sound with pleasure
    fraught,
  That I have heard to-day,
Is a sound mine ear but now up-caught—
  "*This is the first of May!*"

◆

Mr. Bohn, who has been sued by the raisin growers of California, has met with another calamity. Concerning it Mr. M. Segars, of San Bernardino, writes as follows:

> Mr. B. has recently lost one of his apiaries—about 200 colonies—by fire. The insurance agent informed me that it was purely a case of incendiarism, as rain fell the night before, and green grass was growing between the rows of hives. It is generally believed to be a new method adopted by one or more fruit-men to decide the case of bees *vs.* fruit. An effort by fruit-men is being made to convey the impression that Mr. Bohn burned his bees to obtain the insurance money. This cannot be considered for a moment in view of the fact that we are on the threshold of a bountiful crop, having had timely and abundant rains, and that the bees were insured for only $3 per hive. No bee-keeper having such grade of bees, and in such condition, would think of selling at this price. It is hard to predict to what extent the bee-industry will suffer by want of zeal in the defense of this case.

The case is to come on this month, and though the bee-keepers of California do not seem to be alive to their interests, we have aided them to vigorously prosecute the case.

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The Illustrated Australian Bee-Manual, and complete guide to modern bee-culture in the Southern Hemisphere, by Isaac Hopkins, Matamata, Auckland, New Zealand, is the title of a book on our desk. It contains 336 pages, and covers the entire ground of modern bee-keeping. We have had no time to examine the contents of the book, but will publish a review in a future number.

Through Mr. Hopkins we learn that the past season has been a very fair one throughout New Zealand, for bee-keepers. He estimates the honey crop of that island at over 300 tons. With such a prospect it is no wonder that Mr. Hopkins has issued such a good bee-manual.

◆

Let No One be Deceived by supposing that the bees are gathering "lots of honey," because they have noticed a few of "the flowers that bloom in the spring." The "perfect sea of bloom," with "the genial sunshine," will entice the bees and tell a better story !

A Good Place to Stop.—Many of our subscribers complain of the tiresome discussions on the Reversible Hive that have been given a place in the Bee Journal during the past three months.

As a "new system of management" in bee-keeping, it was perfectly proper and desirable to discuss it thoroughly in our columns, but it has now come to a discussion about the hive, the validity of the patent, and matters only appropriate in the advertising columns of bee-papers. Here are two *samples* of many letters which we have received. A subscriber from Louisiana sends us this question :

> Do you not think that the columns of the American Bee Journal are getting pretty well used up for advertising Heddon's hive ? We have no objection to Heddon's new ideas, but give us something else than those long discussions of no interest to the majority.

Another, from Michigan, sends us this query :

> Is the Heddon hive controversy the best thing with which to occupy so much space in the Bee Journal ? While I do not object to the new hive, I am quite well satisfied with the Langstroth, and want to read in the Bee Journal something besides discussions concerning the validity of somebody's patent. If Mr. Heddon wants to advertise his hive, let him do so in the advertising columns ; and if any one wishes to oppose him, let him advertise a better hive in the same department, and relegate all questions on the validity of the patent to the United States courts. At all events, give us something else in the reading columns of the Bee Journal.

We have now arrived at a good place to stop. Mr. H. is entitled to reply to questions and criticisms, and in this week's issue, he has replied to them, and now we will dismiss the subject.

We have a lot of articles on hand discussing different points of the hive controversy—but to publish them will but prolong the unprofitable discussion, and disgust our readers. If the writers of these articles desire it, we will return them—if not, we will dump them into the convenient waste-basket.

We have endeavored to control the controversy—to pour oil on "the troubled waters" of contention, but when men become excited and engaged in "heated controversy" they are not easily controlled or soothed. Enough has been said to give bee-keepers a good idea of the invention and "new system of management," and now we may safely talk of other and more important matters.

◆

New Price-Lists have been received from the following persons :

J. B. Hains, Bedford, O.—8 pages—Apiarian Supplies, Bees and Queens.

A. J. & E. Hatfield, South Bend, Ind.—6 pages—Bees and Supplies for the Apiary.

Ihring & Fahrenholtz, Berlin, Germany.—12 pages—Manufacturers of Comb Foundation Presses, etc.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

◆

Do Not Divide Colonies until after they are strong in numbers and have commenced preparations for swarming, and then only with caution. Too many colonies are *divided* to death.

QUERIES
WITH
REPLIES by Prominent Apiarists.

When to Unite Weak Colonies.

Query, No. 246.—Is it better to unite weak colonies early in the season, or just before the white clover blooms?—W. S.

Early in the season.—H. D. Cutting.

Just before white clover, according to my experience.—G. M. Doolittle.

Here, where we have basswood and autumn flowers, it is best *never* to unite them.—James Heddon.

I would unite them early. Two weak colonies united will sometimes "pull through;" if left alone they may die.—W. Z. Hutchinson.

Generally I should not unite them, but if I did, the earlier the better.—C. C. Miller.

The spring uniting of weak colonies is a mistake, unless they are entirely worthless or queenless, or unless there are already too many in the apiary.—Dadant & Son.

It is better to unite weak colonies just at the beginning of the honey season—unless they are too weak to build up, and are likely to perish, in which case unite early to avoid robbing.—H. R. Boardman.

I think by stimulation, close packing on few frames, and giving capped brood from the strong to the weak colones, we may succeed without uniting them. If we have more colonies than we wish, we may unite them, which I should do at once.—A. J. Cook.

It is better to unite early. Be sure to cage one of the queens, but if one of the colonies is queenless it is not necessary. Place them near each other, and shake off all the bees from the combs of the queenless colony, and take away with the hive. They will unite without trouble, but it is best to look after the queen, if not caged, in a half hour.—G. L. Tinker.

It does not pay me to unite weak colonies in the spring. I prefer to build them up, even though they are mere nuclei. I can build up nuclei and get a fair crop of honey from them if they only fill one space between the combs the first of April. I now have a few such nuclei, and every night the hives are wrapped up with burlap, which is removed in the daytime. If I united colonies at all, it would be about 10 days before white clover bloomed.—G. W. Demaree.

I do not believe in uniting weak colonies at all, unless one is queenless. It is far better to build them up to full strength by drawing on other colonies that can spare a frame of brood occasionally. Of course if you have but 2 colonies, and both very weak, they may be united in order to save them. In such case use the best queen.—J. E. Pond, Jr.

Stimulative Feeding of Bees.

Query, No. 247.—1. Will it do to feed bees in order to stimulate them, if the weather is too cold for them to fly? 2. Will feeding amount to anything if they have an abundance in their hives? 3. Will it stimulate the bees to uncap honey already in the hive.—G. W. M.

1. No. 2. It will do some good, if fed very sparingly, but we would not advise it. 3. Yes, beyond a doubt, this is the best spring stimulant.—Dadant & Son.

1. I should not approve of the course. 2. Feeding is a greater stimulus to breeding than an abundance of stores in the hive. 3. Yes.—W. Z. Hutchinson.

1. Yes, certainly. 2. It certainly will, or does, in our apiary. 3. Yes, and it is as well as feeding, I think.—A. J. Cook.

1. Yes, if they have no stores; otherwise it is not advisable. 2. Not in my experience. 3. Yes, and I deem it the very best method that can be adopted.—J. E. Pond, Jr.

1. Such feeding is not necessary, in my opinion. 2. I think not. 3. To a certain extent, but one warm day with new pollen is better than a week of all other kinds of stimulation.—G. M. Doolittle.

1. I would rather not feed them unless there was danger of starving. 2. In case the queen does not lay well, feeding may urge her, but I do not generally find it necessary. 3. It is probably as good as feeding.—C. C. Miller.

1. They may be fed if it is done judiciously, and with the right kind of feed, without serious results even if the weather is too cold for them to fly out. 2. It increases brood-rearing. 3. If fed in small quantities only to stimulate—yes.—H. R. Boardman.

1. It will not do for me. 2. I am sure it is unprofitable to feed bees that have an abundance of stores. 3. Yes. I discovered this many years ago when transferring bees. Still my bees breed up as fast as they ought to, if they have plenty of sealed stores.—G. W. Demaree.

1. No. 2. Not with healthy colonies in fair numbers. 3. It will save their uncapping it, and aid them in their work of removal to a point near the brood, but if there are plenty of bees to do it, they will get the honey as fast as they can use it—if it is only there to get, or in the flowers.—G. L. Tinker.

1. Yes, it will do if *you* think it will be of any benefit. 2. Not if they are in good condition. 3. I think not. If your bees are in good to fair condition let them alone and you will be just as far ahead when the proper time arrives.—H. D. Cutting.

My queens will, without any feeding, always breed as fast in the spring as the temperature will admit of. Heat is where the lack is, and after many trials I have abandoned stimulative feeding.—James Heddon.

Honey and Beeswax Market.

Office of the American Bee Journal,
Monday, 10 a. m., May 3, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2-lb. sections, 9@12c.
BEESWAX.—23@24c. per lb. Not much offered.
R. A. Burnett, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.
BEESWAX.—27@28c.
McCaul & Hildreth Bros., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.
BEESWAX.—25 cts. per lb.
Blake & Ripley, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.
BEESWAX.—Quotable at 20@23c., wholesale.
O. B. Smith & Co., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.
BEESWAX.—Scarce at 25c.
M. H. Hunt., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½.
BEESWAX.—Firm at 21½c. for prime.
D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.
BEESWAX.—In demand at 20@25c. for yellow.
C. F. Muth & Son, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.
BEESWAX.—Scarce at 25c.
A. C. Kendel, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted, 5@6c.; Southern, 3½@4c.
BEESWAX.—23c.
Clemons, Cloon & Co., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The receipts of honey have been more liberal of late, and the supply is now very fair. We quote: Choice comb, in 1-lb. sections, 17@18c.; in 2-lbs., 16@17c. Extracted, white, in kegs or tin, 7½@8c.; dark, in the same, 6@6½c.
BEESWAX.—Demand moderate at 25c.
A. V. Bishop, 142 W. Water St.

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the Bee Journal.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⟍○ northwest; ○⟍ southeast; and ⚲ southwest of the centre of the State mentioned.

For the American Bee Journal.

Sections—Difference in Colonies.

G. M. DOOLITTLE.

Not long since I chanced to see these words in one of the bee-papers: "In the fall, after extracting sections when re-casing the sections of empty combs, (as we use no separators), the combs are not always perfect in the frames; when we find one side a little fuller than the other, we put the two full sides together, and the hollowing sides together. No matter if the full sides of the comb should touch each other, when the bees begin operations the following season they will cut right through, building out the other sides equally, and the occasional crooked ones are thus made straight."

Upon reading the above I began to wonder if the writer had ever practiced the plan given, and, if so, how it could be that his experience was so much different than mine had been when trying the same plan. In every case where I ever put two combs in sections, or brood-combs even, so that they touched each other, I have found that the bees always left little bridges of comb from one comb to the other, so that when the combs were pulled apart the capping to one or both combs was broken, thus setting the honey to running and making the sections unsalable, unless put back on the hive for the bees to re-cap the cells. In so doing the bees nearly always remove all the honey out of these damaged cells, so that the whole process requires nearly ½ as long as it does to fill a section from the start. This causes a great waste of time to the colony, for they are thus kept fussing over a bad job instead of doing new work.

My plan has been to place such crooked combs at the top of a warm room on a piece of canvas until thoroughly warmed through, when the combs can be bent and straightened to the perfect satisfaction of the operator. If any of the cells jut out too far they are shaved off with the uncapping knife. In this way I have a surer thing of it, and as the work is performed in the winter it is much more cheaply done than in having the bees make a "botch job" of it in the summer.

In another paper I find these words: "Colonies are exactly alike, so near as we can discover, and yet one colony yields an excellent surplus, another none. Why is it?" Here is a question that used to greatly bother me, for I formerly was troubled in the same way, but of late years I have succeeded in making each colony produce nearly like results; *i. e.*, if one colony contains 40,000 bees and produces 100 lbs. of honey, I get about that amount from every colony containing that number of bees; while one having but 20,000 bees gives a yield of 50 lbs.

After careful study I found that colonies which I pronounced "exactly alike" on June 1, would not be so at the time the honey harvest was at its best. The trouble was that I did not have a thorough knowledge regarding the working-force of my bees at all times, nor of the interior of the hive. For instance, the colony which I called my best on June 1, might become one of the poorest by July 10, at which time the honey harvest arrived. This, as a rule, would be owing to a failing queen, as I have often noticed that a colony which wintered extremely well and goes to breeding rapidly in early spring, does not equal one that wintered rather poorly, but commences brood-rearing in earnest about May 25. The reason is that by about June 10th the queen in the stronger one ceases to be as prolific as the other, and this allows the bees to put the first honey coming in into the brood-combs, rather than forcing it into the sections, as does the other through her extra prolificness later on.

I have often noticed if the bees are allowed to get the start of the queen so as to store much honey in the brood-chamber during the first of the honey harvest, that colony will be an unprofitable one. The remedy is to give each colony only as many combs as the queen will keep occupied with brood, and when a colony is found having a failing queen, either give another queen or remove a part of the brood-combs.

Again, the giving of a colony a large amount of surplus room to start with has a tendency to make the colony an unprofitable one, which has not a force of bees large enough to occupy the whole of the surplus department at once. They seem to become discouraged, and instead of taking possession of a part of it, they will often cluster outside, and crowd the brood out with honey, never entering the sections at all. I usually give only surplus room to the amount of 15 to 20 lbs., and a part of this space has combs in it left over from the season previous, thereby coaxing the bees into the sections with the first load of new honey. In a week, more room is given, and so I continue to give surplus room as needed. In this way I always receive a good yield from all. It is the attending to the little items in bee-culture that gives success.

Borodino,⊙ N. Y.

Official Report of U. S. Entomologist.

Artificial Fertilization of Queen-Bees.

N. W. M'LAIN.

Since I began this work I have given much thought and labor to experiments in methods of artificial fertilization. No other branch of apicultural experiment possesses the same scientific interest or practical value to the industry of bee-keeping.

Ever since the art of bee-keeping began to be practiced upon scientific principles, the value of exact knowledge and perfect control of the process of fecundation has been recognized. In 1846 an able German apiarist wrote: "If it were possible to ascertain the reproductive process of bees with as much certainty as that of our domestic animals, bee-culture might unquestionably be pursued with positive assurance of profit, and would assume a high rank among the various branches of rural economy." And in a current number of one of the most progressive bee-periodicals, a prominent writer on apiculture says: "The apiarist who finds out a sure, safe, and certain method of controlling fecundation as it is controlled in the animal kingdom, will confer a great and lasting blessing upon bee-keepers, and be the means of advancing the profession a long way toward perfection." Realizing the difficulties to be overcome, there was little encouragement to expect success. However, all progress "is usually the slow out-growth of repeated trials," and "failures precede successes." Various methods and expedients have been adopted for securing the fertilization of queens in confinement, none of which have proved satisfactory.

During the past two years reference has occasionally been made in apicultural papers to a process of fecundating queens while in the larva and pupa or nymph stage of development, by crushing a drone larva upon the queen larva, or by opening the cell and introducing crushed drone larva upon the nymph queen. In a few instances experimenters have reported that the practice has been successful, and that queens thus treated have begun laying fecundated eggs in from one to two days after leaving the cell. In each of the reported cases some important fact in the evidence tending to establish the genuineness of the claim to success seems to have been wanting or doubtful. In consequence, these reports have been received with reserve and often with ridicule.

For putting these claims to the test, I caused a number of queen-cells to be built, and just before the cells were capped I squeezed the contents of the generative organs of nymph drones upon the larval queens. The bees removed the larvæ and destroyed the cells. After other queen-cells were capped I opened them by making a horizontal incision at the base of the cells, and another at right angles down the side of the cell, and laid back a part of the side, exposing the queen pupa. Through the opening in the cell I squeezed the liquid contents of the generative organs of imago drones upon the pupa queens. The sides of the cells were then replaced and sealed with melted beeswax and resin. These cells were placed in nursery cages and hatched in queenless nuclei colonies. These queens were liberated in nuclei colonies after their wings were clipped. Upon being hatched they resembled fecundated laying queens more than virgin queens. The treatment they received from the bees and their action upon the combs was that of fecundated rather than that of virgin queens. Repeated experiments, however, failed to produce a queen capable of laying fecundated eggs. Still, the fact that the treatment given the embryo queens had to such an extent changed their physiological characteristics was suggestive. From the analogy between the animal and vegetable kingdom, where ripe seed is known to grow better than unripe, it seemed more than probable that the contents of the generative organs of a mature drone would have more virility than those of a drone larva or pupa.

That the active principle in the fluid contained in the procreative organs of the drones attains a degree of activity at a very early stage in their development, is evident from the effect produced by exposing the larval queens to its influence. Continuing the experiment I caused more queen cells to be built. Removing the testes and seminal sac from mature drones with a pair of pliers, the contents were pressed upon the larval queens. The bees removed the uncapped larvæ as before. Most of the pupa queens so treated and placed in nursery cages for hatching died in the cell after assuming the imago state and after being partly colored. I hope to be able yet to discover what principles and practice are essential to success, which seems possible, for many possible opportunities remain untried. While possessing possibilities of the greatest interest and value to the embryologist and entomologist, it is doubtful whether a demonstrated method of what may be called parthenogenetical fecundation would possess the essentials of certainty and permanence in such a degree as to make the method serviceable to bee-keepers. It remains to be tried whether a sufficient number of active spermatozoa may be received into the spermatheca of queens while in the larva, pupa or imago state to render them serviceable for any practicable purpose, even if some of the reported successes were true. Failing to succeed by these methods it appears more reasonable that the best time to fecundate a queen is when she wants to be fecundated, or when orgasm appears. Orgasm takes place in from five to seven days, usually in five days after the queen leaves the cell, and continues for eight or ten days, and a few instances are reported where queens have been fertilized as late as twenty-three days after leaving the cell.

When orgasm takes place the generative organs of the queen are highly excited and much distended. I confined a queenless colony in their hive and gave them a queen-cell which had not been disturbed while maturing, and allowed the queen to hatch. When the virgin queen was six days old orgasm occurred, and on the evening of the seventh day I removed her from the hive and placed drops of the male sperm upon the open vulva as she was held, back downwards, by gently grasping the thorax between the thumb and forefinger. The instant the male sperm was pressed from the testes and seminal sac of a mature drone upon the excited and distended vulva, it was curious to observe the effect. The action of the abdomen and vulva resembled that of young birds while being fed. There was the reaching up after the seminal fluid, and an action of the parts resembling the opening of the mouth and swallowing food. As much seminal fluid as could be obtained, by the imperfect method employed, from three or four drones, was utilized and readily absorbed by the queen, after which her wing was clipped and she was dropped on a frame covered with bees and returned to the hive and the bees were liberated. Up to this time her appearance and action was that of a virgin queen. The next morning, 12 hours after exposure to the seminal fluid, her abdomen was distended and her appearance and action in all respects was that common to fertile, laying queens. She was moving about slowly over the combs and peering into the cells, and 24 hours afterward she had 400 or 500 eggs in worker cells. I watched the development of larvæ from those eggs. In due time worker larvæ appeared, and at this date, November 13, worker bees in considerable numbers are being hatched. I then reared two queens from the eggs laid by this artificially fecundated queen, in queenless colonies, and as soon as they were hatched I clipped their wings, and when orgasm appeared they were treated as before described, and in three days one laid a few eggs in worker cells. The other has the appearance and action of a fertile queen, but has laid no eggs, and the lateness of the season forbids advantageous continuance of the experiments.

Fully realizing the necessity for exactness and certainty in all details, before tabulating the results of any method so revolutionary, I have endeavored to effectually guard against all possibility of the test being abortive. Instances have been reported where fecundation had taken place in the hive; but as many examinations proved that there were no drones in these hives, and judging from the lateness of the season and severity of the weather, probably none in the country, except a few which had been preserved in a queenless nucleus colony by frequently feeding the bees and confining them in the hive, and from the further fact that the experiments were conducted when few bees at any time attempted to leave the hive, and from the fact that these queens' wings were clipped when they were removed from the nursery cage, we can confidently assert that fecundation by the natural method did not take place. These later experiments in fecundation have been conducted through the months of October and November, during the prevalence of most unpropitious weather, and those acquainted with the habits and instinct of bees will understand the difficulties under which I have had to labor. With the return of spring and the advantageous conditions attending the normal season for breeding, and after discovering and adopting better methods and devices for appropriating and depositing the seminal fluid, I am hopeful that the fecundation of queen bees may be controlled with the same ease and certainty as fecundation is regulated among all domestic animals, and that the pedigree of the breeding stock in the apiary will be as readily traced and as highly valued as is the recorded pedigree of the illustrious scions of the turf, and the aristocratic families of the American Herd Book.

I regret that the lateness of the season prevents the further continuance of these tests now, as I fully appreciate the necessity of placing the evidence in support of the facts set forth on the incontestable basis of continued and often repeated successes, and not upon the success obtained in two individual cases. However, the fact that I have succeeded in producing queen bees of two generations which have by artificial means been made to perform the normal functions of naturally fecundated queens, seems to furnish ground to hope that this subject has passed from the plane of experiment to the position of practicability. Other methods for controlling fecundation also remain to be tested.

U. S. Apicultural Sta., Aurora, Ill.

For the American Bee Journal.

Experiments in Wintering Bees.

MAHALA B. CHADDOCK.

I examined my bees yesterday, took off the chaff boxes and cleaned out the Gallup hives, and unpacked the Simplicities. I stated last autumn that I was going to experiment a little. I filled one Simplicity hive with oats chaff packed in solid, put another hive on it with five frames of brood in the middle and division-boards on each side; then another hive on top of that with 5 frames filled solid with honey in the center just over the brood-nest, and division-boards on each side corresponding with those below. I covered the top with Indian-head muslin, and filled in at the sides and on top with chaff. I told them to hibernate, and did not touch them again until now.

I built up four of these monuments. Of course the middle hive—the one containing the brood-nest—had an entrance cut for the bees to go out. When I opened them I found the brood in the upper story of three of them, and they had built large pieces of comb between the combs and all was full of sealed brood, except the sides next to the division-boards, and everything was booming.

If I had no other hives, I would say fix them just so every time. My colonies in Gallup hives (that I fixed with no fussing, but nailed a piece of muslin on an empty honey-box filled it with chaff loosely thrown in, and laid four cobs under it, *a la* Porter), are booming just as much, so what is the use?

Neighbor Phillips' bees, with not a spear of chaff in the honey-boxes, are rushing and roaring just the same. He had the honey boxes, with no honey, on them, and left them on all winter, and he is now ready for the honey harvest without any lifting and lugging around. After the cold weather had set in for good, and everything was snapping and cracking with the cold, he carried a few armfuls of straw and piled on the hives. I want a hive that can be fixed for winter without doing anything to the brood-nest; take off the honey and put on the feather-beds, and no fussing nor backache about it. Who will invent the hive I want?

I clip all my queens' wings when I clean out the hives in the spring, and then let them alone unless they need feeding. I go round between apple bloom and white clover every few days, and lift the hives, and if they feel light I feed at the entrance at dusk, in some feeders that I made out of tin separators that I once used between sections.

Vermont, ⟜ Ill.

For the American Bee Journal.

Using Comb Foundation.

C. W. DAYTON, (116—115.)

There are two different times when the bees will work upon foundation—one of them is when there is a large amount of honey being stored, and the other is where there is not very much honey to be found—about enough to supply the daily wants of a colony. If we give the foundation when there is a heavy yield of honey, the cells will be drawn out so as to be about ¼ of an inch deep, or deep enough to hold honey, and as combs are not so plentiful as honey at such times, the unfinished cells will be filled nearly to the brim with honey which will prevent the bees using the surplus wax in the lower part of the cells. Thus if there is enough wax to construct combs 1 inch in thickness but little more than ½ of it will be economically used.

In working foundation where there is not much honey to be found there is nothing in the way, but if there is more wax than is absolutely required to produce the cells to the depth for brood, it goes to make thick side-walls or "fish-bone," and of course is wasted. I believe it to be the case that when combs are produced to a certain thickness, which thickness may be varied by conditions, the bees use their own wax. It takes about 7½ square feet of straight, natural comb to contain a pound of wax, and it should require but a trifle more than a pound of foundation to produce 7½ square feet of comb.

That weight of foundation seems to be about right when the bees are not getting much honey, but if the honey-flow is heavy it might be economy in money saved to have it much thinner than that, if it can be kept from falling down.

After using several of the different kinds of comb foundation in the frames at a time, I can see no difference in its acceptance by the bees. Sheets of wax barely showing the prints of the press will often be worked into the nicest of comb, if it does not contain too much wax for the occasion, and then cell-bases could be no advantage. If there is any choice it would be in favor of the molded kind, and then only in regard to strength. This choice would be theoretical, however.

Last season I used in the brood-chamber, 120 pounds of foundation running 8 square feet to the pound, and there was less than 3 pounds to be made over again from being pulled down by the bees, and I did not use wires. Perhaps the best way to fasten unwired foundation in the frames is to place one edge under a thin strip of wood tacked to the under-side of the top-bar. In hiving the swarms upon these frames of foundation, for obvious reasons it is advisable to place the frames as close together as possible or alternate them with combs, which should be placed near together. When a swarm has been hived 5 or 6 hours, the frames may be placed the right distances apart, as the foundation will have reached a comb-like aspect. All things considered, I think that this management is easy, and saves valuable time over that of using wires.

Bradford, ♂ Iowa.

For the American Bee Journal.

Replies to Various Criticisms.

JAMES HEDDON.

I ask to be excused for compelled procrastination in replying to Mr. Caldwell. Referring to his first question on page 217, I will say that I have wintered, and propose to winter my colonies in one case of the brood-chamber of my hive. I used under a part, two-inch rims. This experiment was made with but 5 colonies. and it presented favorable results. I am aware that the idea is old. One case of the brood-chamber presents all the comb capacity needed for every purpose for wintering, one of which being to hold sufficient stores to always last from gathering to gathering.

If Mr. Caldwell will carefully read the chapter on the new hive, in my book, he will see that my bees are not in both cases of the brood-chamber, but only one case, at the approach of the cool weather he speaks of. If Mr. C. has read my articles carefully, as he states in his second paragraph, he must have overlooked my words of caution on page 73, at the bottom of the last column, where I advise not to make haste to cast aside a good hive for a better one.

He also wants to know how much more honey can be taken on an average, from these hives than from the old ones. To this I answer, not a drop more. It is bees, not hives that produce honey. I can get as much honey from a nail-keg, or half-barrel, as from any hive. To do it, I should have to devote my entire attention to one keg, or at least not many kegs, or the attention would not go around. When the keg is nearly full, I would cut out some of the honey-combs, thus giving more room, and so on. But if Mr. Caldwell would ask from what hive I believe I can get the best-filled sections of nicest comb honey, with the least amount of friction and labor, I am prepared to say, from the new invertible, double-brood-chamber hive. As far as the quantity of honey is concerned, that depends upon the secretion of nectar, and number of bees to gather it.

The new hive with complete brood-chamber, has the same brood-comb capacity of 10 standard Langstroth frames, and by interchanging and inverting, we can develop one-half more brood than we get from the same brood-comb capacity in non-invertible frames.

I have read Mr. Dadant's article on page 231. As the term "original" is used in patent parlance, it refers to something not borrowed, whether prior or not. I trust that no one imagines that I had any knowledge of these old, dead tiering-hives, laid aside by our French and German brethren. I have yet failed to see an account of any hive containing two distinct apartments (surplus and brood), where the *brood-apartment* was divided into two horizontal sections. If Mr. Dadant's article was written for the purpose of showing that past experiments have proven my new hive and system inferior, I will only say that the construction was so ill, that they could not work successfully, and did not contain the functions of my hive, which fact I am willing to rest with future experiments. If, on the other hand, the article is supposed to anticipate my invention. I have only to refer the reader to Section V, page 213, which reads as follows:

> "Patent law declares that the fact of abandonment and subsequent adoption of things claimed to be alike, is evidence sufficient to negative that claim."

On page 219 we are again treated to a transfer out of a brood-chamber made in sectional parts. I do not know why these statements are written. Are the writers now anxious to transfer back into the double brood-chamber hives? If they are, will it be true that the hives they then transferred out of (abandoned), will be just like those they will now transfer into (adopt)? What has been going on to produce such inconsistent changes? Whatever can be shown in print, that anticipates my claims (either patent or honorary), let us see it by all means; but claims that rest with any one's veracity, are not safe guides outside of United Stats courts, and not then, in many cases. Let him who claims it is in print, furnish it.

I was, some weeks ago, made aware of what Mr. Dadant cites, but that cannot and does not in any sense anticipate any of my claims. My patent claims are outside of it, and my honorary claims to the invention are based upon the fact that I knew no more of these old discarded devices than did Prof. Cook and others, and a dead past can in no way anticipate a living present.

But some may inquire, "Will your new hive live?" I reply—I am willing to leave that to the bee-keepers of to-day. They *are* testing it. Let us await their decision. "Let the dead bury the dead," and the present test the living.

I have read Mr. Kretchmer's reply on page 265, and I still affirm that I made no mistake in my report of Mr. Kretchmer's patent. The 28th line of his specifications reads thus, as you say, Mr. Editor: "The bottom-board G of the box is permanently attached to the sides." There is nothing double about the brood-chamber. There is no "honey-board," nor "metal strips" with frames resting thereon. Mr. K. says that it is "capable of being inverted." In one sense this is true, and in another it is not. Any hive *might* be inverted, even by the wind. This hive is by no means practically invertible. Wedges will not support frames when inverted, and the bee-spaces would be thrown all out of position. Mr. K's patent plainly states the purpose of these wedges, as follows:

> "I insert a wedge-shaped piece of lath for the purpose of closing the crevices between the frames, so as to prevent the bees from depositing their bee-glue between the frames, and to leave no crevice for heat to escape, or where moth might obtain a lodging-place."

The objects sought to gain by the invention are plainly set forth in the specifications, and not one word is said about inverting or interchanging any of the parts of the hive, and no such action is practically possible. The drawings also show that the bottom-board is "permanently attached to the *sides*"—not to the *side!*

Again I assert that in this patent cited by Mr. Kretchmer, *there is not a single feature in any way anticipating my invention.* There is no double brood-chamber, but one deep one. I would willingly leave the matter to Mr. R. L. Taylor, who is a lawyer, and also a large and expert bee-keeper. I mention him because he is in every way fitted to judge, and was mentioned by Prof. Cook in *Gleanings.*

On page 259, Mr. Editor, I think you do us injustice. I see no just comparison in your "chameleon story." The hive that Mr. K. has just sent you is not evidence in this case. What we demand is some sort of proof that is self-evident, and that is no doubt what is demanded by Messrs. Alves and Cook.

In Mr. Kretchmer's last paragraph, he says that since then he has carefully examined my hive, system and patent. He should have done this before he wrote. There is hardly a bee-keeper in the country who yet thoroughly and entirely understands all the functions of the hive in question. Mr. K. says "special system" and "particular construction." Let me say to Mr. K. and all, that my invention covers vastly more ground than a single "particular construction" or "special" line of management. A thousand hives might be constructed, all characteristically different, every one of which might infringe my invention.

Two-thirds of all that has been written with a view to uprooting my invention, has really had no bearing upon the subject whatever. In the United States courts we should be compelled to give more or less weight to the *sworn* statements of witnesses against the novelty of the hive, and that testimony would weigh according to its reasonableness and the integrity of the witness, as can be shown from what he has said and written before; and even then perjury may do injustice; but here, in a bee-paper, nothing amounts to evidence worthy of consideration, except what can be shown in public print.

Dowagiac, Mich.

For the American Bee Journal.

Fertilization of Flowers.

J. F. LATHAM.

As a farewell to the subject I wish the indulgence to inform Mr. S. D. Webster that, in my opinion, his quotation, on page 203, from my article on page 153, embodied an allusion to a living principle in the economy of Nature—a molecular affinity or co-relation of organic entites—a connecting-link between the animal and vegetable species, and the lower the descent in the scale of existence the more prominent it becomes, as evidence of the—*beginning.*

I believe that is a settled conclusion among geologists, that the vegetable species commenced their rounds of development prior to the animal species; and, at the compatible grade of their development, furnished the entites from which the animal races have evolved. But the precise point in the development of cosmic matter at which evolution commenced, is beyond the reach of human investigation. The Great First Cause, like the symbolical fruit of Paradise, is guarded from man's irreverent touch; he can find out the Universal Life-Giver—the Fructifying Power, but not unto perfection. He can see in the phosphorescent glow of the steamer's path, as it dashes through the briny waves, evidence of the existence of the molecules of future entites. He can see in the "jelly-fish," as it floats in the calm waters of the land-locked estuary, maintaining in its movements the impetus imparted to it by the waves of the open sea, an entity from the path of the steamer on a round development. Its food is the elements from which it originated, its organism but a degree in advance of the vegetable, and its animal functions being but the power of volition, imparting to it but the impetus to maintain existence where the strictly vegetable entity would perish. Divide it into pieces, and each fragment becomes a distinct entity in the sphere of its progenitor. Will not this process of organic growth hold good when applied to the method of development of all the species of animate life which inhabit the great deep?

But, we are not compelled to search the ocean for a manifestation of the Life-power; it is all around us. It permeates the rivers and rills, lakes and ponds as well; and there is scarcely if at all, a vegetable which springs from the earth, but that furnishes support to the infant entites of living, moving forms—future animals and insects. So it is plainly evident that we are not wholly indebted to the testimony of the rocks when seeking to unveil the affinity of animal and vegetable existence—the co-habitation, so to speak, of the positive and negative, or active and passive forces, which represent the propagating agencies, as displayed in the attributes of the universal-spiritual, and universal-material principles; cosmologically unfolded in the vivifying expanding impulses of nature, in endless evolution.

The bees and the breeze may convey the fecundating element from flower to flower, but fructification can be accomplished only when the elemental conditions are susceptible of molecular assimilation. This—as I believe it to be—bottom fact from the occult store-house of Nature, the connection of animal and vegetable life—seems to exercise a more subtile influence in matters pertaining to some of the vital elements of bee-keeping than at first thought it may be supposed to exercise; for had it been properly understood, the "pollen theory" would never have been, and the disciples of the "hibernation theory" would have sought elsewhere than a hollow-tree, for the basic principle evinced in the winter repose of the hive-bee.

I see nothing in Prof. Cook's kindly notice of my article, page 188, original with the Professor, that appears to substantially conflict with my statements. Both tend to the same point. In short, I feel gratified in being sustained by so eminent an authority. But I am not prepared to believe with "all botanists," that gaily variegated, or showy uni-colored petals are assumed by the floral species for the purpose of inducing insects to their banquets of sweets, or stores of pollen for the purpose of accomplishing their fecundation. Chemical constituents produce showy uni-colored petals in the floral species, and hybridizing, or cross-fertilization, will result in variegation. Showy flowers may be more prominent in attractiveness, than plain ones, and thereby "fool" the bees at times, as I think I have observed; but nectar and pollen are the substantial allurements, and the appetite and habits of the insects the prompters of their visits, thereby enhancing the increase of useful vegetation.

Cumberland, ♀ Me.

For the American Bee Journal.

Feeding Sugar to Bees.

H. E. HILL.

"I have seen sugar taken there by the barrel." I think that almost any of those who practice sugar-feeding have heard this remark, and if they have ever attempted to give an explanation as to why and the wherefore of it, they will understand what a task this is, and generally to no purpose.

The teachings of such men as Messrs. Hutchinson, Heddon, Doolittle and others are carefully followed by many. Their writings are eagerly sought after and their suggestions are put into practice at the first available opportunity, and many seem to think, "All I have to do is to follow their plans, and the result will be abundant success." The writer has been no exception to this class, for such writers as these are our teachers. I am sure that any bee-keeper cannot too highly estimate the value of their articles, that contain the results of their experience and practice. But do they not make mistakes sometimes?

For instance: Has Mr. Hutchinson on page 152, given a lesson that will prove beneficial both to bee-keepers and the honey market, or otherwise? Mr. H. says: "If no more sugar should be used for winter stores, or fed for any purpose for 20 years, these same stories would live and be repeated." I do not wish to contradict this statement, for although I believe "those stories" would die out entirely in that length of time, I have no more to prove that such would be the case than Mr. Hutchinson has to prove his assertion. But certainly people could not say as they do now, "I have *seen*, etc.," which seems to be the backbone of the falsehoods in circulation at present.

Farther on in his article, Mr. H. says: "The sugar fed to bees is not a drop in the bucket, so far as the sugar market is concerned." I do not think that anybody has intimated that the sugar market would be built up simply by the sugar consumed by the bees, although the hundreds of barrels used annually certainly assists sugar manufacturers more or less. But it builds the sugar market up by laying the foundation for such conversation as we hear oftener than we would if we left sugar out of the apiary; something similar to the following: A lady asks the price of honey and adds: "Is this *the pure*, or the manufactured?" The dealer replies, "That is pure honey from Mr. Brown." "O my, I can buy sugar for 7 cents per lb., and if you want to know what Mr. Brown makes his honey out of, ask his neighbors." Such stories lose nothing by traveling and soon nearly everybody in town will not pay 15 cents for sugar when they can get it for 7. This seems too bad just because some people think that bees cannot be wintered just as successfully on honey as with something that gives grounds for suspicion, thereby destroying the market for the genuine article.

Many of our most successful apiarists do not use sugar for winter feeding, nor any other purpose about the apiary. One, for example, is Mr. J. B. Hall of Ontario, whose colonies number several hundred. His annual crop of honey (principally comb) is counted by tens of thousands of lbs. His average loss in winter does not exceed 3 per cent. and I am quite sure if any of the bee-keepers that seem to think success hinges on feeding sugar were to offer sugar gratis, to be used in Mr. Hall's apiary, it would be refused.

Of the many thousand pounds neatly stored in Mr. Hall's honey-room last September, he says in a private letter, "I have just two one-pound sections left. I have had to refuse many orders." Mr. Hall has learned by experience that feeding sugar does not pay, as has Mr. Demaree also, who says in a recent number of the *American Apiculturist*: "I am now convinced that sugar syrup is inferior to honey for winter stores in this climate, and I want to enter my protest here against the wholesale sugar-feeding going on in the apiaries of the country." This agrees with Mr. Hall and the Editor of the BEE JOURNAL, when he says: "This sugar-feeding is is undermining the honey-trade." Mr. Newman, in an editorial on page 195, says: "To avoid the appearance of evil, use honey for feeding bees."

The above shows that some of our best men are awake to the dangers of feeding sugar to bees; and let us all hope that all men of influence, may realize that fact, and use their influence in the way that is best for our pursuit.

Titusville, ⊸ Pa.

For the American Bee Journal.

Des Moines Co., Iowa, Convention.

The Des Moines County Bee-Keepers' Association met at the Court House in Burlington, Iowa, at 10 a. m. on April 27, 1886. The subject of wintering was discussed. Mr. Breder has a bee-house built expressly for wintering. The Secretary also has such a building. Many others winter their bees on the summer stands, and some in cellars. Some prefer to have a hive slope forward, and others to have them stand level, the latter method seeming to have the most followers.

"Which race of bees winter the best?" The general answer was, "No difference." Mr. Landeck favors the blacks because they work earlier in the morning. Mr. S. J. McKinney favors the Italians because the queen is more easily found. A vote was taken as to which bee was the best worker, and the hybrid was preferred by the majority.

Mr. Bischoff and Mr. Landeck reported drones at their apiaries. The subject of swarming was discussed, and the majority favored natural swarming; also some claimed that there was no difference between natural swarming and dividing colonies.

Mr. Bischoff had a Shuck's invertible hive on exhibition, which attracted much attention. Winter losses were about 10 per cent. according to the reports of members.

JOHN NAU, *Sec.*

For the American Bee Journal.

Extensive Brood Rearing, etc.

ALLEN LATHAM.

I wintered 5 colonies of bees, and they came through the winter in fine condition; each had brood by March 1. I fed them several pounds of rye meal. We have had two weeks of nice weather here, and since Sunday, with the exception of Tuesday, the mercury has risen to 80° above zero; to-day going to 84°. This weather is the weather for bees. They have carried in a large amount of honey for this time of the year, and I believe I never saw pollen go in so fast and in such loads. I examined my bees to-day; and I found that every hive is nearly full of brood. The weak colonies have nearly the same quantity of brood as the strong; one hive, which has not more than a pint or so of bees, has about one thousand square inches of brood, or four full frames. If this weather continues they will do well, but if it does not, and a cold spell comes, there will be some chilled brood, I fear. I have not yet taken the packing from the hives (I packed my bees for the winter with shavings), and I shall leave it till May. Last March, as I examined one hive, I found a sealed queen-cell in it with a larval queen inside. The hive had a fertile queen which I saw, and also eggs and brood. What is the reason for their rearing a queen at that time of the year? Apple trees are nearly ready to bloom.

Lancaster, ⟜Mass., April 23, 1886.

Convention Notices.

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.

B. F. CARROLL, *Sec.*

☞ The next meeting of the Cortland Union Bee-Keepers' Association will be held at Cortland, N. Y., on May 11, 1886, at 10 a.m.

D. F. SHATTUCK, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

☞ The Central Michigan Bee-Keepers' Association will meet on May 18, 1886, with Capital Grange at their Hall in North Lansing, Mich., to hold 3 sessions, viz: Forenoon, afternoon and evening. All interested in bee-culture are invited to attend and bring articles of the apiary for exhibition. For any special information address the Secretary,

E. W. WOOD, N. Lansing, Mich.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

Local Convention Directory.

1886. *Time and place of Meeting.*

May 5, 6.—Texas State, at McKinney, Tex.
B. F. Carroll, Sec., Dresden, Tex.

May 11.—Cortland Union, at Cortland, N. Y.
D. F. Shattuck, Sec., Homer, N. Y.

May 18.—Central Michigan, at N. Lansing, Mich.
E. W. Wood, Sec., N. Lansing, Mich.

May 20.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

May 25.—N.W.Ills. & S.W.Wis., at Pecatonica, Ill.
J. Stewart, Sec., Rock City, Ills.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Strong Nuclei.—J. F. Latham, (29—29), Cumberland,♀ Maine, on April 26, 1886, says:

My bees have wintered finely. I never had them winter better. Three nuclei colonies, with not more than a quart of bees in each, are as strong as last fall, and are building up vigorously, having been favored for a week with very warm weather, for the season.

Good Season Expected. — W. V. Whitney, Waucoma,♂ Iowa, on April 23, 1886, says:

Bees are a-booming. I put 99 colonies into the cellar on Nov. 14, 1885, and on April 9, 1886, I took 94 colonies out in good condition, except 3 that were queenless, and those I doubled up with others. The weather is warm and nice. We have not had a frost since April 8. I think that my bees have flown every day since they were taken from the cellar. Every thing bids fair for a good honey season. One colony that is on scales gained 4½ pounds yesterday.

Italianizing Bees.—W. J. Cullinan, Mt. Sterling,+o Ills., on April 23, 1886, writes:

Having commenced the work of Italianizing my apiary, I will give my success thus far. First, I purchased a choice Italian queen, and introduced her to a full colony with success, as follows: I caught and caged the queen in the colony to which I wished to give her, leaving her caged 9 hours; at the end of that time I took her out and put my new queen in the same cage, leaving her there 24 hours. I then liberated her about 6 o'clock in the evening. On examination the next morning, I found her attending quietly to business, and apparently in fully harmony with her large family. She has since been doing good work. Yesterday (it being the 6th day after her introduction) I took out three frames containing eggs and young larvæ, and placed them in a strong colony after depriving them of their queen; crowding the bees into six Langstroth frames. I receive the American Bee Journal regularly every Wednesday, and though my subscription is not half expired, I consider I have already received more than my dollar's worth.

Beautiful Weather for Bees.—Thos. Stokes, Minesing, Ont., on April 20, 1886, writes:

We are having most beautiful weather here now, the mercury the last few days ranging from 70° to 80° in the shade. Bees have been carrying in pollen, and now they are bringing in some honey. My colonies are very healthy, and most of them are strong, after being wintered in a clamp packed with sawdust. I put the first of them away on Nov. 1, 1885, and put them out the last of March—rather early, but I was afraid of their being short of stores, as the last fall was very poor for honey. Three colonies had died from starvation, and I since have found some that were queenless, thus leaving 23 colonies from 32 put away. These are the increase from 3 colonies in the spring two years ago.

Fine Weather for Bees.—C. W. Dayton, Bradford,♂ Iowa, on April 20, 1886, says:

Since the cold weather, which ended on April 8, we have had the warmest weather (from 65° to 85° above) of any which I can remember at this time of the year. It appears like midsummer, and the bees are rolling in the pollen from morning till night. What I am afraid of is, that it will cause them to extend the brood so much that if we get a cold snap there will be a great deal that may be destroyed.

An Apology.—J. E. Pond, Jr., Foxboro,o+ Mass., writes:

Rev. Mr. Clarke arraigns myself—and justly so—on page 246. I am always desirous of keeping within the bounds of courtesy in discussion, but in the case to which Bro. Clarke refers, I frankly admit that I overstepped them. I trust that Bro. Clarke will accept my apology in the same spirit it is made, when I say to him that the words he alludes to were penned upon the impulse of the moment, as a figure of speech, without any basis therefor so far as any articles of his are concerned, and without thinking of the inference that might be drawn. All I meant to say was, that a clergyman had, without a chance to test the matter, made a very favorable criticism in favor of a theoretical question. I own up to the error, and will endeavor not to repeat it; and in this case I will say, that I have never seen anything in Bro. Clarke's articles that does in any way show that he presumes upon the fact that he is a clergyman, to give strength to the point he argues. I might have apologized in a private letter, but I deem that an apology to be of value should be made as publicly as the offense.

Clover Mainly Killed, etc.—Ira Barber, De Kalb Junction,♂ N. Y., on April 21, 1886, writes:

The bees in this locality have wintered nicely, as a rule, and are having a lively time on the willow and soft maple, which the last few days of hot weather have rushed into bloom. The bees have no time for plundering, but go directly to work, and have all they can attend to. I finished putting out bees to-day, and I found a loss of 12½ per cent.—all my own fault, by carelessness in leaving two cellar-windows out when the bees were put in, and the cellar was closed. I have known all winter that the temperature was too low, and what the trouble was I did not know, until I took the bees out and found the windows lying on the wall. The outlook for a crop of honey is far from favorable in Northern New York. We have had but little snow here all winter, and the fields have been bare, or nearly so, all the time, so that the clover is badly killed out; and that is our main dependence for a large crop of honey.

The "October Theory."—W. Z. Hutchinson, Rogersville,♂ Mich., says:

Mr. Bittenbender seems to possess the happy faculty of drawing apparently correct conclusions from false premises. At least some of his premises appear to be false. He says: "Bees in their natural state in the woods keep themselves in the trunks of trees 4 to 6 inches thick, where the autumnal sun cannot disturb them in their October and November repose. We thwart nature's ways when we put our bees into a ⅞-inch hive, and let the sun beat upon it till cold weather comes, disturbing the bee in its natural repose." This is the second theory that has been built upon the false assumption that bees in bee-trees, "in a state of nature," winter better than in the modern apiary or cellar. The "hibernation theory" *may* be true in the sense in which its author *now* uses the word; and I certainly agree with the author of the "October theory" in thinking it important that bees be packed early, or else put into the cellar early; but, bee-keepers, do not build your theories upon *bee-trees*.

Getting Ready to Swarm.—2—J. L. Haworth, (1—7), Georgetown,o+ Ill., on April 26, 1886, says:

I have 7 colonies of Italian bees in Langstroth hives. One colony has had drones flying for several days, and upon examination to-day I found new queen-cells about ½ of an inch long. They have just been booming since warm weather came.

Bees Wintered Well.—Geo. W. Homer, Dubuque,⊶ Iowa, on April 22, 1886, says:

My bees wintered well out-doors, the loss being 4 colonies out of 75, fall count. Their condition is fair to first-class. The weather here could not well be better than it has been for the past week, being as balmy as in June, and the bees are merry.

Nice Weather for Bees.—F. M. Taintor, Coleraine,⊸ Mass., on April 24, 1886, says:

I placed my bees on the summer stands on April 14, after a confinement of 5 months in the cellar. They wintered well, but are light in bees, owing, I think, to flying so much last fall. We have had very warm weather since I carried them out, so at present they have a fine lot of brood for this time of the year; and if this weather continues they will be all right.

Bees in nice Condition.—Wm. H. Graves, Duncan,⊙ Ills., April 24, 1886, writes:

My bees have wintered in fine condition. I had 59 colonies last fall, and now I have 58. Never since I have kept bees have I had them in as nice condition at this time of the year. They began carrying in pollen on March 16. I wintered them on the summer stands, except 4 that were in the cellar—the first that I ever wintered in a cellar, and they came through nicely. I could not help but wonder at the small amount of honey consumed. Last season was the poorest for honey I ever saw; I had only about 500 pounds from 60 colonies. We have every prospect now for a good honey season. My bees are building up rapidly.

Upward Ventilation, etc.—J. W. Johnson, McFall,⊸ Mo., on April 21, 1885, writes:

I think that I have the winter problem settled, at least to suit me. Ventilation is necessary, and upward ventilation at that, for we must keep from the bees the hot air that rises in bitter cold weather. In the fall of 1884 I put my bees up for winter—50 colonies in all—and when the next May came I had 7 colonies, and only 1 out of the 7 was very strong. When I examined them I noticed an open space in the honey-board. The upper story was just set on, and no straw nor anything else was in it. Last fall I had some 40 colonies, and when I put them in for the winter this hive was left in really a worse condition than it was the previous winter, and the colony in it came out strong again this spring; while lots of my colonies that were put up in good condition, as I thought, were dead. I now have 27 colonies of bees. I took a frame from this strong colony yesterday to build up a weak one, and it had brood in it. Upward ventilation is the best in winter, I think.

Feeding Maple Syrup, etc.—Freeman Chute, Port Burwell, Ont., on April 19, 1886, writes:

Although I have been a bee-keeper for about 30 years, yet I find that I know nothing as I ought. I commenced the winter of 1885 with 24 good colonies, and the next spring I had 1 colony. The winter just past I tried to winter 11, and came through with 8. The cause of my loss of the 3 colonies I attribute to too many frames in the hive, which did not allow the bees to cluster enough to keep up the natural warmth. The cellar I keep them in is wet, but roomy, and has not much ventilation. 1. Does the presence of vegetables injure the wintering of bees in the same room? 2. Is maple syrup good to feed bees when they are short of honey? 3. What is the occasion of bees swarming out in the spring and alighting, and if put back will come out again and act so till they perish?

[1. If the cellar is kept sweet, the presence of vegetables will not be detrimental.

2. Yes; maple syrup will answer when the bees have occasional flights.

3. They are disgusted with their quarters, short of food, or something of that kind. The causes are numerous.—Ed.]

Strengthening Colonies.—D. S. Goff, Ridgefield,♂ Ills., on April 28, 1886, says:

I have 1 weak colony of bees, and a neighbor about 10 rods away has 3 colonies. 2 of them being pretty strong ones. The 2 strong colonies have commenced to rob mine a little, and I thought it would be a good plan to strengthen them with a pound of Italians. What is the best thing I can do?

[Yes; if the queen is good. Buy a pound of bees and give them to the weak colony.—Ed.]

No Loss in Wintering.—D. R. Rosebrough, Casey,⊶ Ills., on April 24, 1886, writes:

It perhaps will be remembered that last fall I stated if it was a detriment to have too many bees in the hives to winter, it would affect the wintering of my bees, for my hives were then full of young bees; but the winter is ended, spring is here, and my bees are all right. I wintered 55 colonies without loss. How is that for out-door wintering, and in thin hives? All except one of my queens are living, and all had brood but one colony, and that was strong in bees, so I exchanged some of its frames with those of other colonies. This has been the finest week for bees that I have ever known at this time of the year. Apple, cherry, and plum trees are in full bloom. It is as safe to work with the bees now as it is in the middle of white clover bloom. I have drones flying, and a few colonies are working in the surplus apartments. I have no weak colonies. The past is my second winter without loss.

Early Queens, etc.—N. H. Rowland, Keene,⊙ Ky., on April 26, 1886, writes:

Bees are booming. I never saw them breed up faster. Apples are in full bloom, and the weather is just right. I have already reared one lot of early queens to supply some colonies that had lost their queens through the winter. The queens were laying on April 20, and have had drones flying since March. This is the earliest I have ever reared queens. Our old friend, the American Bee Journal, still makes its weekly visits, as it has been doing for years; and though an old visitor, it is always a welcome one, for, in my opinion, it is still ahead of all others.

Breeding in the Cellar.—S. J. Youngman, Cato,⊙ Mich., April 17, 1886, writes:

Bees have wintered fairly well. I removed my own from the cellar on April 9, after a confinement of 126 days. Several of the colonies were very heavy, one having several frames of brood in all stages, from the newly laid egg to hatching bees, and no *diarrhea*. How does this agree with the pollen theory? One of my neighbors also had a colony wintered in a cellar, with brood in all stages, and it had drones flying on the next day after being put out. Is it common for bees to breed in dark cellars?

Bees Wintered Fairly Well.—F. H. McFarland, Charlotte,⊸ Vt., on April 26, 1886, says:

Bees have wintered fairly well here, although some have lost quite heavily. Mr. A. E. Manum called a few days since, and informed me that his bees never wintered better, having lost less than 2 per cent. of the colonies which I prepared for winter for him last fall. He has, this spring, about 700 colonies. The past week has been quite warm, and considerable pollen and some honey has been gathered. Our early honey-plants, before fruit bloom, are the willow, elm and maple.

Bees Wintered Splendidly.—Jno. Haskins, Empire Prairie,⊸ Mo., on April 27, 1886, says:

All of my bees have wintered splendidly but one colony that was queenless, I think. I wintered all of them except 2 on the summer stands without any protection, but snow that I shoveled around them, except in the fronts of the hives. The fruit trees and red-bud are in bloom.

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

The Illustrated Graphic News, an enterprising pictorial weekly, will begin May with a brighter and livelier issue than ever. Among the attractive and interesting features of the May 1st number, will be the Entry of the Apache Indians into Ft. Marion, Fla., as prisoners of the United States; a series of illustrations showing the work of the terrible cyclone in Minnesota, which laid waste two entire towns; besides many pleasing pictures. A grand May number will appear on May 8, including a magnificent double colored supplement.

◆

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

◆

Alsike Clover Seed.—We can furnish Alsike Clover Seed at **$8.50** per bushel—or **$2.25** per peck. These prices will take the place of those published in our Catalogue, until further notice.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

◆

Convention Notices.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold their next meeting at Mr. Ed Whittlesey's, 2½ miles south of Pecatonica, Ills., on May 25, 1886.
J. STEWART, *Sec.*

☞ The first semi-annual meeting for 1886 of the Keystone Bee-Keepers' Association will be held in the Court House at Scranton, Pa., on May 11, 1886. Two sessions will be held—at 10 a.m. and at 1:30 p.m. Officers will be elected for the ensuing year. Valuable essays will be read as follows: Production of Comb Honey, by G. M Doolittle; Production of Extracted Honey, by L. C. Root; and Queen-Rearing and General Management, by the Dadants, and others to follow. All are cordially invited to be present.
ARTHUR A. DAVIS, *Sec.*

Advertisements.

FOR SALE.—Best Brood Foundation at 40 cts.; Light, 50 cts. Samples free. Also Sections, Smokers, etc.—GUST. PROCHNOW, Maysville, Wis.
17A4t

FOR SALE.—100 Colonies Italian Bees and **200** Tested and Untested Queens.
17A4t **E. BURKE,** VINCENNES, IND.

PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
11Atf O. CLUTE, **Iowa City, Iowa.**

200 **COLONIES** of Choice Italian Bees for Sale. For terms, adddess
W. J. DAVIS. (box 148),
13W9t YOUNGSVILLE, PA.

FOR SALE.—25 good Chaff Hives for $25.00; 50 good 8-frame Hives for $20.00; 1,000 first-class wired Combs, 17⅝x9⅛ inches, shipped in good 8-frame supers, 12½ cts. each; 100 Colonies Italian Bees at $5.00 each, 9-inch No. 1 Dunham Foundation Machine, $20.00; 1 Barnes' Combined Foot-Power Saw, $30.00. **R. HYDE,**
18A1t ALDERLY, WIS.

3 **FRAME NUCLEI.**—Each Nucleus contains a Tested Queen, with 3 full-sized frames, covered with bees and hatching brood—can soon be built up into a strong colony. Only **$3.00** each—cheaper than swarms. Address,
REV. J. E. KEARNS, Morning Sun, Iowa.
18A1t

Foundation and Italian Queens.

Brood Foundation, 1 to 10 lbs., per lb.	45c
" " 11 to 25 lbs., "	43c
" " 26 to 50 lbs., "	42c
" " 100 lbs., "	40c

Thin, for sections, 10 cts. per lb. extra.

Queens—Extra Tested, each	$3 00
" Tested, "	2 00
" Untested, "	1 00
" " for 6	5 00

Address, **A. WORTMAN,**
18E3t SEAFIELD, White Co., IND.

COMB FOUNDATION!

Reduced 5 Cents per pound.

UNTIL Further Notice, we will sell brood foundation at **40 cents** per lb., and **thin,** for surplus honey, at **50 cents** per pound. This reduction from the prices quoted in our Price Lists for 1886, is made on account of the decline in the price of Beeswax.

CHAS. DADANT & SON, Hamilton, Ill.
THOS. G. NEWMAN & SON, Chicago, Ill.

ITALIAN QUEENS.

I WILL furnish **Warranted Italian Queens-Bees** for $1.00 each; Tested Queens for $2.00 each. Delivered by mail.

PETER BRICKEY, Lawrenceburg, Ky.
18A18t

INTRODUCING QUEENS.

HENRY ALLEY has given in the May number of the *American Apiculturist* several New Methods for Introducing both Fertile and Unfertile Queens. Sample copies free. Address,

AMERICAN APICULTURIST,
18Atf WENHAM, MASS.

STANLEY'S

Automatic Honey-Extractor.

THE only **Self-Reversing** Extractor known. Warranted to do more than double the work of other Extractors, and to give entire satisfaction. Send for New Circular, just out, giving full list of prices, etc. Address,
G. W. STANLEY, WYOMING, N. Y.
18A1t

Silver Hull Buckwheat

85 **CENTS** per Bushel—Sacks included.
MILLS & HAWORTH,
18-21-24 GEORGETOWN, Verm. Co., ILLS.

200 Colonies Italian & Hybrid Bees

FOR SALE,

IN 9 and 10 frame hives, all strong and healthy, wintered in the cellar. Will deliver them aboard of cars—for Italians, **$8.50**; Hybrids at **$7.50.** Will guarantee as represented, or money refunded. **Italian Queens**—Untested, $1.00; Tested, $2.50. Send money by P. O. Order or Registered Letter.
16W8t **L. J. DIEHL,** BUTLER, IND.

STRAWBERRIES. Send as many stamps to C. WECKESSER, Marshallville, O., as you want plants for, and see what a nice collection he will send you. State what varieties you have and prefer. BEES & QUEENS Cheap! Send for Circular.
17A2t

HEAD-QUARTERS IN THE SOUTH

For the manufacture of

Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

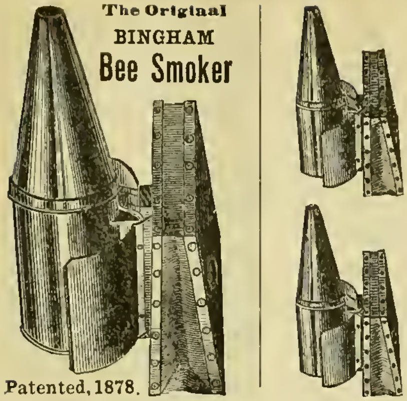
BEES, NUCLEI AND QUEENS.

AFTER June 1st, 1-frame Nuclei, with untested queen, $1.50; with tested queen, $2.50. Two-frame Nuclei, with untested queen, $2.00; with tested queen, $3.00. Queens from 75 cents to $3.50. For more frames in nuclei, add 50 cts. for each extra frame, and 50 cts. extra if with selected queen. These prices are for Italian or Carniolan queens, and by the dozen; for less, add 10 per ct. Write for price-list.
2C6t **A. J. NORRIS, Cedar Falls, Iowa.**

BEES FOR SALE.—20 Colonies of Italian Bees in Simplicity hives with reversible frames, at **$3.00** each. Also Bees by the pound.

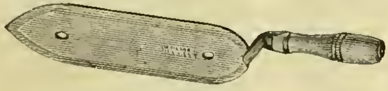
G. HILLJE,
17A2t SCHULENBURG, TEXAS.

The Original
BINGHAM
Bee Smoker



Patented, 1878.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

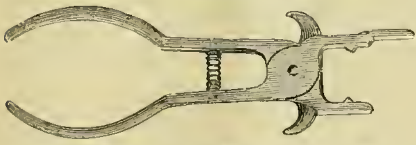
Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
15Atf **ABRONIA, MICH.**

JONES' FRAME-PLYERS.



FOR taking frames out of hives, or moving them in any way desired. It is made of galvanized iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Plyers. Price, 40 cts., by mail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Bee-Hives, Honey-Boxes, Sections,

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

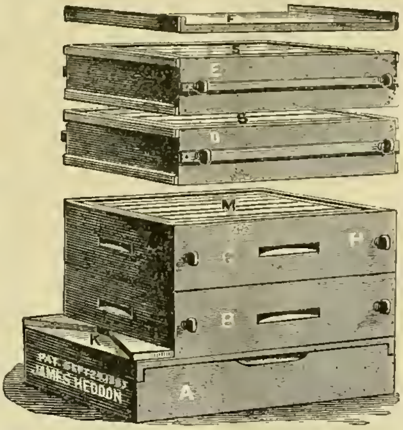
C. B. LEWIS & CO.
51Atf. **WATERTOWN, WIS.**

DO YOU EAT CANDY?

SEND $1.25 and I will express 5 lb. Todd's Honey Candies, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's New Book mailed free for $2.50. **ARTHUR TODD,**
1910 Germantown Ave., PHILADELPHIA, PA.
17A9t

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.10** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives, 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison-St., CHICAGO, ILL.

Doolittle's Queens.

For Prices, &c., see page 221.
17Atf

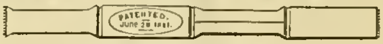
FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Prices Reduced.

THE "BOSS" ONE-PIECE
SECTIONS.



Patented June 28, 1881.

WE have REDUCED the PRICES on One-Piece Sections as follows:

One-Pound Sections, In lots of **500 to 3,000, ℔ 1,000, $4.00**

☞ For larger orders write for prices. ☜

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., April 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

LOOK! LOOK!

ALL-WOOD Langstroth Frames, same as A. I. Root's make, $1.50 per 100; $12.50 per 1,000. Comb Foundation, made on latest improved Mill. Heavy, in 10 or 20 lb. box, 40 cts. per lb.; Thin, 45c. Simplicity Hives, Sections, Smokers, and Supplies generally. **Pure Italian Bees and Queens** a specialty. Circular and Price-List free.

C. M. DIXON,
16W4t PARRISH, Franklin Co., ILLS.

A YEAR AMONG THE BEES,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

SOLD!

HAVING Sold the 100 Colonies of Bees offered in the March Numbers of this JOURNAL, I am now booking orders for **Nuclei Colonies and Queens Only.** Also **Bee-Keepers' Supplies.** Send for 1886 Price-List. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
14Wtf COLERAINE, MASS.

THE AMERICAN APICULTURIST
(ESTABLISHED IN 1883.)

WILL be mailed to any address for 3 months, on receipt of 25 cts. in stamps. **Sample copies free.** Address,
12Atf AM. APICULTURIST, Wenham, Mass.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to

A. I. ROOT, Medina, Ohio.

IF YOU WANT a good, well-made, durable and practical Machine, send for the

I. X. L. HONEY-EXTRACTOR.

For 2 Langstroth or square frames, only $6.50. Other sizes in proportion. Excelsior Cold-Blast Smoker, postpaid, 75 cts. W. C. R. KEMP,
17A4t ORLEANS, IND.

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Dtf LIGHT STREET, Columbia Co., PA.

BEE-HIVES, SECTIONS,

Foundation & Apiarian Supplies.

Having a large stock of sections on hand we will furnish them in crates of 500 each, (less than 500, ¾ ct. each), size, 4¼x4¼x1⅞.................. $2 50
From 1,000 to 5,000—per thousand.............. 4 50
" 5,000 to 10,000— " 4 25
" 10,000 and upwards " 4 00
4½x4½, at same prices. All V-grooved.

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices.

For description and prices of the **SUCCESS HIVE**, send for Price-List. Estimates given on all other Hives.

QUEENS AND BEES FOR 1886.

We make a specialty of rearing the **ALBINO QUEENS AND BEES.** Price-List free.

S. VALENTINE & SON, Hagerstown, Md.
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WEBER'S MAGAZINE
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Devoted to Physical, Mental, Moral, and General Self-Improvement, will be sent for the **THREE** next Three months free to any one who says where he saw this, and sends us his address, together with 10 cents to pay postage, etc. Remember that this **MONTHS** chance is not open long and should be accepted at once. We have secured a number of the most able contributors who will supply our colums during **FREE** 1886 with choice articles upon those all-important subjects. It is worth its weight in gold to everybody. Subscription price is only $1.00 per year. Agents wanted everywhere. Address,

M. S. WEBER, Pub.,
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The Queen-Rearing Establishment

Of F. J. DOKOUPIL,
VIGAUN, OBERKRAIN, AUSTRIA.

	Apr.	May.	Jun,	July.	Aug,	Sep.	Oct.
Krainer Queen,	$2 00	$1.75	$1.50	$1,25	$1.25	$1.00	$1.00
Italian Queen...	2.25	2.25	2 00	1.75	1.75	1.50	1.50
Syr. or Cypr. Q'n.	5.00	5.00	5.00	5.00	4.50	4.50	4.50
Ditto, home-bred,	3.00	3.00	2.75	2.75	2.50	2.50	2.50

We will send Queen-bees, by mail, postpaid, and guarantee them to be of the PURE RACES, at the above mentioned prices, for each queen. 9C3t

Established 1857.
BAKER & CO
Satisfaction Guaranteed
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
FOOT BLOCK.
CLARK & MONROE STS.
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DEALERS IN
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(ESTABLISHED 1864.)

BEE-SUPPLIES. Wholesale and Retail.

We furnish EVERYTHING needed in the Apiary, of practical construction, and at the **lowest price.** Satisfaction guaranteed. Send your address on a Postal card, and we will send you our Illustrated Catalogue free. **E. KRETCHMER,**
6Ctf COBURG, Montgomery Co., IOWA.

Italian Bees and Comb Foundation.

50 to 100 **COLONIES** of very choice Italian Bees for spring delivery. Prices greatly reduced. Nuclei, Queens, and Bees by the pound for the season.

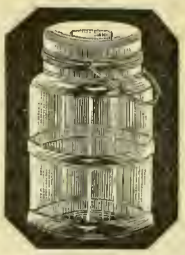
COMB FOUNDATION FOR SALE.

Wax made up by the lb. or worked for a share of the wax. Samples of foundation free. Price-List ready.

O. H. TOWNSEND,
10Etf ALAMO, Kalamazoo Co., MICH.

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ... **$1.60**
" 2 pounds " " **2.00**
" 3 " " " **2.50**

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

FIRST IN THE FIELD!
THE INVERTIBLE HIVE!
INVERTIBLE FRAMES,
Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,
10Aly **J. M. SHUCK, Des Moines, Iowa.**

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,
SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHAS. F. MUTH & SON,
Freeman & Central Ave., - CINCINNATI, O.
P.S.—Send 10c. for Practical Hints to Bee-Keepers

APIARIAN SUPPLIES

IN order to dispose of our large stock of Hives, White-Poplar and White-Basswood Sections, we will sell for this season at **Greatly Reduced Rates.** Send us your order for lowest cash figures before ordering elsewhere. We will guarantee best of workmanship.

THE H. F. MOELLER MFG. CO.,
Cor. Western Ave. & 5th St., Davenport, Iowa.
6A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE **Hives and Sections** —Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

W. Z. HUTCIHNSON,

In order to more fully supply the wants of his customers, has entered into partnership with his neighbor, R. L. Taylor, and will offer for sale, bees (full colonies, or by the pound), queens, Given foundation, white poplar sections, hives, cases, feeders, empty combs, etc., etc. Also hens' eggs, for hatching, of three varieties. For circular and price-list, address **W. Z. HUTCHINSON.**
8Etf ROGERSVILLE, Genesee Co., MICH.

ITALIAN BEES AND QUEENS,

Plymouth Rock Eggs and Rabbits.

Send for Circular to, **C. WEEKS,**
14E4t CLIFTON, TENN.

HOW to MONKEY with BEES

and Price-List of Apiarian Supplies. Sample of Foundation free for your address on a postal card.
J. W. Bittenbender, Knoxville, Marion Co., Iowa.
14Etf

O **The BUYERS' GUIDE is issued March and Sept., each year.** ☞ **280 pages, 8½x11½ inches, with over 3,500 illustrations — a whole Picture Gallery. GIVES Wholesale Prices** *direct to consumers* **on all goods for personal or family use. Tells how to order, and gives exact cost of everything you use, eat, drink, wear, or have fun with. These INVALUABLE BOOKS contain information gleaned from the markets of the world. We will mail a copy FREE to any address upon receipt of 10 cts. to defray expense of mailing. Let us hear from you. Respectfully,**

MONTGOMERY WARD & CO.
227 & 229 Wabash Avenue, Chicago, Ill.
12A13t

Italian Bees in Iowa.

60 **CENTS to $1 per lb.; QUEENS, 30 cents to $2.50.** NUCLEI and COLONIES. Order from my new Circular.

OLIVER FOSTER,
10Atf MT. VERNON, Linn Co., IOWA.

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ⅓ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

Carp

The National Journal of Carp-Culture,
—ESTABLISHED IN 1885.—
(8-Page Monthly, Illustrated, 50 cents a year.)

The only Journal in the United States devoted to the interests of Carp-Culture. Sample free.

Address, **L. B. LOGAN,**
2C6t **Akron, Ohio.**

200 COLONIES
OF
ITALIAN BEES

FOR SALE.—In Langstroth hives, wired foundation frames. Very low. Also 300 of our Improved Sectional Honey-Cases used with or without separators. Circular free.

A. J. & E. HATFIELD,
13Etf SOUTH BEND, IND.

1886. ITALIAN QUEENS. 1886.

6 Warranted Queens for $5.

Write for circular. No circulars sent this year unless called for. **J. T. WILSON,**
3Ctf NICHOLASVILLE, Jessamine Co., KY.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. May 12, 1886. No. 19.

The World is a looking-glass
  Wherein ourselves are shown,
Kindness for kindness, cheer for cheer,
Coldness for gloom, repulse for fear,
  To every soul its own ;
We cannot change the world a whit,
Only ourselves which look in it.

◆

The Winter Losses of Bees were very small indeed in the Northern States. In the Middle States the losses were heavy—probably on account of the poor quality of the honey they had for winter use.

◆

Get all the Colonies Strong, so as to be ready for the honey harvest when it comes. They should "build up" nicely with the fruit-bloom, now so abundant. After that there will be a dearth until white clover comes. During that time the bees should be developing, so as to have multitudes to gather the white clover harvest.

◆

Go Slow! We would advise beginners to go slow at first, and not invest too largely in the business. We had a visitor a few days ago who contemplated investing several thousands of dollars in an apiary. He will, in all probability, "go home and *think* about it" before investing very much money in a business about which he knows nothing.

◆

New Price-Lists have been received from the following persons :

J. Van Deusen & Sons, Sprout Brook, N. Y.—4 pages—Flat-Bottom Comb Foundation.

O. H. Townsend, Alamo, Mich.—1 page—Comb Foundation and Bees, accompanied by very nice specimens of foundation.

E. T. Jordan, Harmony, Ind.,—4 pages—Bees and Bee-Keepers' Supplies.

Thos. L. Thornton, Dividing Ridge, Ky.—6 pages—Honey, Bees, Queens and Supplies.

A. O. Crawford, South Weymouth, Mass.—16 pages—Honey-Labels, etc.

M. E. Mason, Andover, O.—1 page—Hives and Foundation, with good samples of the latter.

Any one desiring a copy of either of them, can obtain it by sending a postal card to the address as given above.

Mr. J. E. Pond, Jr., writes us that it has been intimated by some that he has endeavored to get himself engaged as counsel for the "National Bee-Keepers' Union." As the Editor of the AMERICAN BEE JOURNAL is the Manager of the "Union," he desires us, as that officer, to say publicly, if such is the case, and we cheerfully give the facts as follows :

Last fall, while preparing to defend the sheep-bees case, we wrote to Messrs. Demaree and Pond, as both were lawyers as well as bee-keepers, to know upon what terms they would undertake the defense of the case. Mr. Demaree responded that it would be difficult for him to leave his home at the time mentioned, but if it was deemed essential, he would do so ; but suggested that the case might be studied by Mr. Pond and others, and "points of law" might be written out for use by the local attorneys, and it would be less expensive and do just as well as to take the more expensive method.

Mr. Pond replied that if it was deemed necessary he would go to Wisconsin and conduct the case, but that he did not think the Union could afford to employ him, and pay the necessary traveling expenses. He said that he could not afford to do it for less than day-pay for the time occupied in coming and going, etc.

After consulting with the Executive Committee, we concluded to employ local attorneys, and have Messrs. Demaree and Pond review the case, examine the authorities, and write out "points of law" for use at the trial.

This was done, the "briefs" were sent to us, and, together with several others furnished by other lawyers, were sent to Mr. Freeborn for use by his counsel. We paid $25 each for the "briefs," and $100 to the local attorneys, besides some other expenses.

If such a report as Mr. Pond intimates is being circulated, it must have been caused by a misunderstanding of the facts in the case. As to who are intimating anything of of the kind, we are not advised, but the facts we have recited, which will also be published in the annual official report next June, will set at rest any such false rumors. Mr. Pond offered to gratuitously advise with the local attorneys, but never intimated to us such a thing as desiring to be employed as counsel for the Union.

◆

Sensible Words are those of Mr. C. H. Dibbern, in the *Plowman*, which read thus :

> The successful bee-keeper must be ever on the alert, and do things at the right time. Some weak colonies may still need feeding or uniting with others ; remembering that instead of a great many colonies we want all strong in numbers. Everything possible should be done this month to induce the queens to fill the hives with brood and bees, as they are the ones that will gather the honey. Do not give the bees too much room till warm weather comes to stay.
>
> In most localities it is no use to put on the surplus honey arrangements until the white clover commences to bloom, towards the last of the month. The entrances should be contracted till the bees show signs of laying out, then more honey-sections should be put on, rather than enlarging the entrances. Under no circumstances allow the bees to lay out idly on the hives during the honey harvest.
>
> The apiary should be a model of neatness and beauty. All hives, caps, etc., not containing bees, or in use, should be stored elsewhere. A few trees, evergreens and flowering shrubs, planted among the hives help to relieve the sameness of the scene, and in summer give a grateful shade to the bees and their keeper. Everything about your shop and honey house should be kept scrupulously clean and neat. No friend or customer should ever be allowed to leave your place feeling any doubt as to the cleanliness or purity of the honey you may wish to sell him.

◆

Riot.—While the steam press was rattling off last week's AMERICAN BEE JOURNAL, a bloody riot was in progress at the McCormick Factory, about three miles south of our office ; but it was promptly quelled by the police. This seemed to exasperate the rioters, and they held a meeting on the Haymarket Square on Tuesday evening, hurling denunciations at the police, and all constituted authority. The police were ordered to break up the meeting and disperse the crowd. A bomb of dynamite was then thrown in the midst of the police officers, which exploded with terrible effect—then there was a general firing of pistols on both sides, but the mob scattered, running into the alleys and adjoining streets, leaving the dying and injured ones to be cared for by the police. Five of the policemen are dead and several others will die very soon. Some 40 or 50 more are injured, but are expected to recover. Of the rioters, many are killed and wounded—nearly all are being cared for at the Hospital.

The instigators of the riot as well as many of the participants are arrested, and will be tried for their lives.

We give these facts to correct the erroneous opinions held in the country concerning the condition of affairs in Chicago. We have heard of some who imagine that the city is in the hands of the anarchists, that business is practically suspended, that citizens are being assaulted and murdered in the public streets, and that in fact a "reign of terror" exists in this city. In consequence, considerable trade has been diverted from this city, under the false impression concerning the status of things here. It is true that some of the railroads have been embarrassed by the strike of the freight-handlers, but they are now in operation, and are doing all they can to catch up with the business that has accumulated. Shipments have only been delayed a few days at most, but now even that will be remedied.

There has been no danger of personal violence at any time, if persons keep away from the crowds, and attend to their regular business—except, of course, to the policemen. "Law and order" are in the ascendency ; and the anarchists are quailing before the tempest of popular indignation, which their murderous deeds have invoked.

LATER.—On Monday morning we open this page to say that the freight-handlers have declared the strike "off," and have gone to work again. This ends all the trouble so far as shipping goods is concerned, and business now will go on with its usual promptness.

◆

The Outlook for a large honey crop is very promising. White clover looks well, and there is an abundance of fruit bloom. Bees are building up rapidly in numbers. Unless we get a very pronounced "setback" there will be a large honey crop this season.

QUERIES

WITH

REPLIES by Prominent Apiarists.

In-and-In Breeding of Bees.

Query, No. 248.—Among 40 colonies I have 2 that build comb of wondrous purity and beauty, but as the queens of these colonies are of the same age, and daughters of the same mother, will it do to rear queens from one of these, and drones from the other? Or are they too nearly related to do well?—Subscriber.

I think I would risk it for the first year.—C. C. MILLER.

I should prefer it otherwise; however, you might try it.—G. M. DOOLITTLE.

Do not be afraid to rear queens and drones from either colony. Your bees will get a change of blood only too soon.—H. D. CUTTING.

Just such in-breeding often, no doubt, takes place in all of our large apiaries with no serious result for one generation, but continued in-breeding deteriorates, and is not apt to occur where the queens can have a choice.—G. L. TINKER.

I should use my best if they were closely related. Close in-breeding has made our magnificent shorthorns. With care it may do as much for our bees.—A. J. COOK.

Among 40 colonies, the chances of securing the mating of queens of one particular colony with the drones of another, are small indeed. I think that no harm would result from the course that is mentioned, even if the desired mating were secured.—W. Z. HUTCHINSON.

I think it most probable that there is no peculiarity about those 2 colonies. The time and circumstances under which they build that beautiful comb, may have had more to do with it than the bees. All things being equal, I would prefer to breed from queens which show excellent traits. I should not fear the results of in-breeding. You can do as you say, but it will be like a lottery ticket as to the mating. I want at least 20 colonies to rear drones of the stock I want to breed from. I commenced with 2 Italian colonies, both had drones plentifully, and I got just one out of twelve of my queens mated at home.—G. W. DEMAREE.

I should most certainly try the experiment. There is less danger than is supposed from in-and-in breeding. Some of our very best varieties of stock have been produced by so doing; all that is necessary being, when weakness is found to exist, to breed strength back again. The matter requires care, however.—J. E. POND, JR.

Enameled-Cloth or Oil-Cloth Covering.

Query, No. 249.—Have you used enameled cloth or oil-cloth on top of the frames, and under the chaff cushion, during the past winter? If so, with what success?—J. S.

No; nor would we use it in the winter.—DADANT & SON.

On a few; and as a result I had wet hives and moldy combs, but the bees wintered fairly.—G. M. DOOLITTLE.

Yes, I have, and I must condemn its use over bees in winter. A plate of cast-iron over them would not be more effectual in rapidly radiating the heat, nor be more impervious to moisture.—G. L. TINKER.

I have used some painted cloths on the frames for several years, and they have done good service, but I decidedly prefer bee-quilts made from carpeting.—G. W. DEMAREE.

No. The enameled cloth not being porous, will prevent moisture from evaporating. If the colony is warm enough to prevent this moisture from freezing, all may go right; otherwise the colony will probably be lost.—J. E. POND, JR.

I have used it in just this way for about ten years with the best of success. Enameled cloth is the best thing I have found to cover frames and sections. When put up for winter put plenty of dry, warm covering on top of the enameled cloth. I use a chaff-cushion.—H. D. CUTTING.

I have not. I tried it once and did not like the result. I now think that it was because it was not warm enough over the cloth. I think that it is just as well to use wood or oil-cloth, but we must keep this so warm that water will not condense below.—A. J. COOK.

Storing Comb Honey.

Query, No. 250.—Does comb honey in sections lose in weight in being stored away, after being taken off from the hives?—S.B.

Not perceptibly, unless it leaks.—DADANT & SON.

I presume it does a very little, if in a place favorable for drying.—C. C. MILLER.

It probably does if it is in an atmosphere conducive to evaporation.—W. Z. HUTCHINSON.

I have never found it to do so, and I do not think that it will to any perceptible degree.—J. E. POND, JR.

Possibly a little in warm, dry rooms. In damp rooms it may gain in weight.—A. J. COOK.

Slightly if stored in a warm, dry room. If in a damp, cool room it gains slightly and deteriorates fast.—G. M. DOOLITTLE.

If exposed to currents of air probably it would lose in weight. The nicest way to keep comb honey is in white poplar shipping-crates, in warm, dry rooms.—G. L. TINKER.

If kept in a dry, warm place it will lose slightly in weight; but if stored in a damp place it will gain slightly in weight by absorbing moisture from the atmosphere, to the injury of the honey.—G. W. DEMAREE.

It may lose or gain according to its chance to "ripen" or absorb moisture. I should prefer to have mine where it would lose in weight. We cannot be too particular about the really good quality of our honey. It will pay us well to look to this point.—JAMES HEDDON.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 10, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2lb. sections, 9@12c.

BEESWAX.—23@24c. per lb. Not much offered.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 20@23c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ apvance on above prices. Extracted in barrels, 5@5½.

BEESWAX.—Firm at 21¼c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.

BEESWAX.—Scarce at 25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The receipts of honey have been more liberal of late, and the supply is now very fair. We quote: Choice comb, in 1-lb. sections, 17@18c.; in 2-lbs., 16@17c. Extracted, white, in kegs or tin, 7½@8c.; dark, in the same, 6@6½c.

BEESWAX.—Demand moderate at 25c.

A. V. BISHOP, 142 W. Water St.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♁ north of the centre; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⟍○ northwest; ○⟍ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Hum, Sweet Hum.

EUGENE SECOR.

Tho' soft strains of music from palace may come,
Be it ever so charming, there's no sound like "hum."
The bees are so busy this bright, sunny day,
There's joy in the air—so happy are they.
Hum, hum—sweet, sweet hum,
In all the bright spring-time, there's no sound like "hum."

When prisoned at home during Winter's long reign,
How joyous to bask in the sunshine again!
The birds singing gaily, the frog's cheery call—
Give me them—and the "bee-note," sweeter than all.
Hum, hum—sweet, sweet hum.
The "bee-man" can never dispense with their hum.

To me there is nothing so sweet to the ear,
As the music that comes from the apiary near.
No allurements abroad can entice me away
From the spot where the bees, tho' at work, seem to say,
"Hum, hum—sweet, sweet hum,
No labor is irksome to us when we hum."

Toil on, little workers—evangels are ye
Of the sweets in this world to be garnered by me—
The sweets that from cheerful activity come;
Then cease not to labor, continue to hum.
Hum, hum—sweet, sweet hum,
There's no earthly music like *Industry's* hum.

Forest City, Iowa.

* * *

For the American Bee Journal.

Large Honey-Yields, Wintering, etc.

WM. F. CLARKE.

I have been strongly importuned to write out in full the remarks I made on that red-letter day of the Detroit Convention, which will be always memorable to bee-keepers as the one on which the winter problem was forever solved, and the main difficulty in the way of successful bee-keeping removed. It is not easy to satisfy this request, because what was said was almost wholly spoken on the spur of the moment, and under the influence of exciting circumstances that cannot now be recalled. The AMERICAN BEE JOURNAL gave a very correct report of my remarks as follows:

"Rev. W. F. Clarke said there were three matters of great importance to him which had transpired to-day. First, Mr. Hall had explained his method of bee-keeping, and he was much obliged to him for it. Second, Mr. Barber and Mr. Hall had supplied confirmation of the hibernation theory. A year ago he did not understand Mr. Barber's method. Mr. B. said at the Rochester Convention that he (Mr. C's) method was a cold system of wintering, and his (Mr. B's) a warm one. This was a mistake. Our systems are alike, only Mr. Barber secured the right temperature in the whole cellar, and I secured it in the single hive. But Mr. Barber's bees quiesce in the fall; if the hive is too full of bees, a cluster will hang outside; they remain in torpor until the breeding instinct awakes, and then they arouse to activity. Third, the pollen theory has got its quietus from Prof. Cook. He has told us in scientific terms the nature of bee-food, and the process of assimilation. He has maintained that bees cannot breed without pollen, and that they cannot stand work without taking nitrogenous food. If they take that food it must be digested, and the feces excreted. Well, Mr. Barber and Mr. Hall have proved that bees breed largely, *i. e.*, work hard, and therefore must eat and digest strong food. The inferences are plain. The bees, if they excrete, do it in dry feces. They must excrete, that is clear. Therefore, there is no danger in having pollen in the hive. On the contrary, it is necessary."

Taking the above as a text, I will endeavor to explain and amplify upon it for the information of those who were not present. First, as to Mr. Hall's method of bee-keeping: I had long known that Mr. H. had been in the habit of obtaining prodigious yields of comb honey, one season averaging as high as 250 pounds per colony. Naturally, I had been trying to find out how this was accomplished. I will not say that Mr. Hall had wilfully tried to conceal his art, but confess that I had been stupid enough not to discover where the secret of his success lay. The apparently simple questions of Mr. Muth made the mystery clear. They were as follows:

"C. F. Muth asked if he understood Mr. Hall correctly yesterday, that his honey harvest closed about July 20, and that last year he did not put his bees out until May 2. If so, how did he obtain a sufficient force of bees to get in the honey during so short a harvest?

"Mr. Hall replied that the secret lay in the bees being kept so warm that they bred early. He expected his hives to have several combs with brood in them by the time he put them out in the spring. By May 20, there would be not only brood in 6 or 7 combs, but that number *full of brood.* He could not winter without pollen, because if he did, he would not have his bees bred early enough in the spring to gather in the honey. If they started without brood they would not build up to strong colonies until near winter."

It was no new thing to be told that we must have a numerous force of workers in readiness to gather the honey harvest. We have known that from time immemorial. How to do it, was the question; how to multiply bees in time for the brief season of ingathering. If they did not breed until they came out of winter quarters, there would not be time to rear the force of workers needed. Mr. Barber and Mr. Hall winter their bees in such a way that they begin to breed long before spring opens. They house them in a temperature which enables them to hibernate in early winter, and then when the breeding instinct rouses up, to generate warmth sufficient to hatch out young brood.

Messrs. Barber and Hall treat a cellar as if it were one vast hive, and regulate the temperature so that the bees can control it at will. It is kept at a point which favors hibernation so long as the bees remain inactive, but becomes warm enough for brood-hatching whenever the bees begin to bestir themselves, as they do about mid-winter. The same phenomenon happens in a hive so packed out-of-doors that the temperature inside can be regulated by the bees. They sink into the hibernating condition on the approach of winter, and they arouse to the work of brood-rearing on the approach of spring. It is all a *question of temperature.*

The third point is in reality anticipated. Bees cannot breed without pollen. If there be none in the hive, they must await the advent of spring to start brood-rearing. That is too late to provide the requisite working force to gather in the honey harvest. So the presence of pollen in a hive, instead of being a source of danger is absolutely necessary to the welfare of a colony. In proving the indispensableness of pollen on the resumption of activities in a hive, Prof. Cook extinguished the theory which makes the absence of pollen a condition of successful wintering.

The light on these three points shone so clearly and blended so harmoniously that, to me, it was like a new revelation. I seemed to see all at a glance. It was like sunrise when you are standing on the mountain-top. The standpoint is such that every object is illuminated at once. Every one did not share my feeling of ecstasy, because all had not climbed by the same dark, rugged road as I had to the mountain-top, or if they had, they had fallen asleep with the toil of the ascent, while I was wide-awake, and eager for the expected vision. So I beheld the sun-burst, they did not; I was enthused, and they were not.

I see that Mr. Demaree, since the convention, resolves the large yields of honey gotten by Mr. Hall, into "locality." This, I think, is a mistake. I do not doubt that Mr. Hall could go to Christiansburg, Ky., and get a much larger honey crop than he does at Woodstock, Ont., for the very reason that he would obtain it from a slow, steady yield of nectar, instead of having to prepare his bees for a single brief "dash" at the honey flow. If we can get our hives brimful and running over with bees by the time the first bloom comes in the spring, we shall secure large yields of honey in any average locality, be the season a brief or a protracted one.

Guelph, Ont.

For the American Bee Journal.

My Report for 1885.

B. F. WOODCOCK.

As I have kept a strict account of the expenses and receipts of my apiary during the season of 1885, it may not be uninteresting should I present it for inspection.

My number of colonies in the fall of 1884 was 37; in the spring of 1885, 34; I then doubled them down to 30. I credited my apiary with the following:

1345 lbs. comb honey at 15c....	$201 75
1710 lbs. extracted honey at 10c	171 00
4 Italian colonies sold.........	26 00
1 hybrid colony sold...........	6 00
Total......................	$404 75

In addition to the above I think I should be safe in counting my increase, as I had them out for a flight a few days ago, and every colony was alive, and in fine condition. I had 36 swarms, but I sold some and doubled down the rest to 28. This would, at $5 per colony, add $140, making $544.75. Our good friend, Dr. Miller, can count the swarms or not, but if he does not, we will make them count next summer.

It may be asked, "But did you pay out no money?" Yes, and here are the figures:

30 lbs. of foundation............	$ 9 75
650 1-lb. sections................	3 25
300 2-lb. sections................	2 00
Glass, nails, tacks, etc..........	2 00
1 keg of white lead & 2 gals. oil.	3 00
Oil-cloth	1 00
20 Langstroth hives in the flat..	12 50
Honey-pails not returned to stores	2 45
Total......................	$35 95

I do not charge up the remaining 8 hives necessary for the swarms, since they were kept over from the previous year, and had been charged up to that year's honey account.

Some may inquire, "How about your honey-crates and kegs?" The bees were charged with and paid for the crates several years ago; and when I sell a keg of honey I charge the purchaser with the keg.

"How do you get 10 cents per pound for all your extracted honey, when we are glad to get 8 cents, and throw the keg in?" I do it by having worked hard for seven years to create a home market. I never have shipped a pound of comb honey, and very little extracted. I sell most of the extracted honey at my door in 3 to 5 gallon jars, the customer in almost every case buying the jar along with the honey, and that at a profit to me, as I buy them by the wholesale. The honey is all sold except about 250 pounds, and I could sell that in half a day by hitching up the ponies and going out with it; but it is not necessary as it will all be taken away from the honey-house long before new honey is on the market.

The way I figure it, my bees have given me $508.80 for my pains; or, if I am not permitted to count my increase, $368.80 I have kept bees for nine years, and there has been but one year out of the nine in which the bees did not give me 50 per cent. better results than anything on the farm. If any one wishes to know how I managed my bees to get over 100 pounds per colony, spring count, in an average season, the information will be freely given.

Pleasantville, Iowa.

* * *

For the American Bee Journal.

Johnson Co., Ind., Convention.

The Johnson County, Ind., Bee-Keepers' Association met at Franklin, Ind., on April 3, 1886, with Pres. Hall in the chair. About 60 bee-keepers were present, and the convention was an enthusiastic one. Pres. Hall delivered his annual address, on "The Bible Bee."

The following officers were elected: President, C. H. Hall, of Franklin; Vice-President, W. W. McCaslen, of Franklin; Secretary, L. R. Jackson, of Urmeyville; and Treasurer, Phebe J. Kelly, of Franklin.

Prof. D. A. Owen then read an interesting essay on "The Benefits of Bee-Keepers' Associations." The following experiences were given:

H. H. Luyster—I first commenced bee-keeping with the box-hive. I made a failure of it, and in a few years lost all my bees. In 3 or 4 years I tried it again with the Langstroth hive, and I have since been moderately successful.

A. T. Kelly—I have 27 colonies in Langstroth hives. Bees have wintered well.

L. R. Jackson—I have lost 5 out of 6 colonies of my Syrians. The Italians have wintered without loss.

G. Kerlin—I had 30 colonies last fall, and I think they are all alive now. I give no protection to them, and lose but few bees.

H. Williams—I protect my bees by a tight fence on the west side of the apiary, and a shed over the hives, filling the upper stories with leaves to absorb the moisture.

W. W. McCaslen—I give my bees no protection. I wintered them in a house one winter and lost all of my bees, and now I prefer to leave them on the summer stands.

H. H. Luyster—I winter my bees without protection. This winter I left the boxes on a part of them, and the hive-covers of 2 colonies were so warped that they had strong upward ventilation, yet they are in good condition.

John Tilson—I put part of my bees into the cellar, and they have used less than half as much honey as the ones left on the summer stands. They are all living and in good condition. I do not believe that bees will freeze. They may chill so that they cannot move the cluster to the honey, and starve with plenty of honey in the hive.

F. L. Dougherty—Bees have wintered well wherever I have been. I have tried wintering both in the cellar and out-doors, and I prefer leaving them on the summer stands. During my father's life we built a large cellar for our bees, and the first winter we did not lose a colony. The next winter we placed the bees in the cellar and lost all; since that I have tried every way that I have heard of, and I find nothing that suits me as well as to lay sticks across the frames to hold the quilts up, and cover with forest leaves. I do not believe that bees will freeze as long as they can get to the honey. They may become chilled, and to all appearance be dead, and remain in this condition for 24 hours, and then if they are warmed and fed they will live.

Prof. Owen—I would like to know if our bee-keepers generally keep a record of their bees, and know the condition and the work of each colony. I believe it very essential that this should be done. If we wish to succeed in any business we must know what we are doing.

F. L. Dougherty—I keep a record of my bees.

L. R. Jackson—I also keep a record of my bees, the age of the queens, and the amount of honey taken from each colony.

Adjourned till 2 p.m.

AFTERNOON SESSION.

The convention was called to order at 2 p.m., Pres. Hall in the chair.

On the subject of "Spring feeding of bees," Mr. F. L. Dougherty said—I would not feed to stimulate breeding. If the bees are short of stores, feed enough at once to last them.

L. R. Jackson—Do bees hibernate? Prof. Owen says that they do not; some others say positively that they do. I have never found them in a condition that I would call hibernating.

Pres. Hall — That depends upon what is meant by "hibernating." More than ⅔ of the discussions of this subject come from not understanding the true definition of the term used. If it is meant exactly what the word really means, they do not hibernate.

F. L. Dougherty—A few—only a few—claim that bees hibernate; but they have been downed at every point of their argument. It seems to me an easy thing for any one to settle this question in his own mind. I have opened a hive of bees every day in the year, and have never found them in a condition to be called hibernating. The least jar will cause the bees to move, which they would not do if they were hibernating.

PREPARING FOR THE HONEY-FLOW.

Pres. Hall—I put the boxes on and let the bees get ready themselves. I do not pretend to know how it should be done.

A. T. Kelly—I put the boxes on when the bees begin to whiten the combs in the brood-chamber.

F. L. Dougherty—I do not know of any better general rule than that given by Mr. Kelley. I can tell from the hum of the bees when they are getting a surplus of honey, and then give more room; but not too much at one time. When bees begin to get a surplus of honey, they will come in heavily laden and fall in front of the hive, many of them before they reach the hive. To get bees ready for this, remove all the combs that the bees do not need, and when they get these well filled with brood, give them another comb by spreading the brood, and add frames in this way as fast as they will use them. Do not give them combs too fast, or the bees cannot use them, and the brood will become chilled. At the beginning of the honey-flow give them two empty combs in the brood-chamber, and put on the boxes. This gives the queen room in the brood-chamber and the bees in the boxes, and if you have managed rightly all the other frames will be filled with brood from top to bottom, and the bees will usually go to work in the boxes at once.

FOUL BROOD.

F. L. Dougherty—I have seen but two cases of foul brood, and know but little about it. If I had a case I would burn both bees and hive at once. If I had a large apiary affected with it, I do not know what I would do with it.

L. R. Jackson—I have had no experience with it. I found several cases of it at and near Vevay, Ind., last spring. I learn that there is some of the Vevay honey in our market now, and I would caution all bee-keepers against buying any honey to feed their bees, as some are talking of doing. Do not buy honey to feed your bees unless you know where it comes from.

Pres. Hall—I once had a colony of bees that was nearly all drones. Was it queenless?

F. L. Dougherty—I think that it was, and had what is called a laying worker.

W. W. McCaslen—I once had such a colony. I do not believe that they were perfect drones. They were small and not fully developed. I put a swarm in with them and they killed all the drones in a few hours.

F. L. Dougherty—The drones were perfect, and were only small because they were reared in worker cells. If they had been reared in drone cells, they would have been as large as any drones.

PROTECTION AGAINST BEE-MOTH.

Pres. Hall—I know of no protection as good as a strong colony.

F. L. Dougherty—There is no protection except strong colonies. It is natural for moth to eat beeswax, and they are the only thing that can digest it. A strong colony is never bothered with moth. To see what a strong colony could do with moth, I gave such a colony a comb literally alive with them, and before night they had carried every moth out and torn down the comb and carried the web and all away.

DIVIDING COLONIES.

F. L. Dougherty—Many persons divide their colonies until all are so weak that none of them are of much value. One strong colony can rear more brood than three or four weak ones. Colonies should not be divided until they are nearly ready to swarm.

Pres. Hall—What are the indications of bees swarming?

F. L. Dougherty—Building queen-cells.

A. T. Kelly—Can you keep back a swarm by cutting out the queen-cells?

F. L. Dougherty—It is a disadvantage to cut out the queen-cells to prevent swarming. If they have commenced to build queen-cells it is best to let them swarm, or divide them. The bees may be hived on empty frames for a few days and then returned to the old hive and be satisfied.

Pres. Hall—Is it an advantage to clip the queen's wing?

F. L. Dougherty—It is. If you are there when the bees swarm, to catch the queen as the bees come out, and put an empty hive in the place of the old one, the bees will return and go in it. If you are not there, the bees will return to the old hive and may be divided.

A. T. Kelly—Are the bees not liable to go into some other hive?

F. L. Dougherty—They may at times, if there is anything to attract their attention to some other hive.

A. T. Kelly—That is the trouble with my bees, and the reason I object to it.

F. L. Dougherty—There is no more danger from this than any other way. Anything that would attract their attention to another hive in this way would attract them in any other way.

W. T. Hougham—Is it the old or young queen that comes out with a first swarm?

F. L. Dougherty—The old queen always goes with a first swarm, unless she has been superseded.

John Tilson—Bees will always sting me when I go near them.

F. L. Dougherty—It is usually our own fault if we get stung. Many persons use too much smoke, and drive the bees from the combs before they fill themselves with honey. Every bee thus treated becomes an enemy.

W. W. McCaslen—Why are some colonies cross when they swarm?

F. L. Dougherty—It is usually second swarms that have come from hives that are short of stores.

H. H. Luyster—How far will bees go for honey?

F. L. Dougherty—Usually 2 miles; sometimes 5 miles. When they have to go over 2 miles they cannot work to much advantage.

W. W. McCaslen—Has Alsike clover any advantage over white clover, for bee-pasturage?

F. L. Dougherty—It has more bloom, and by cutting it may be made to bloom almost the entire season. It is superior to red clover as a feed or for pasture for stock, and is better as a fertilizer.

W. W. McCaslen—Is it as hardy as red clover?

L. R. Jackson—I think that it is a hardier clover than the red, and will stay in the ground longer.

John Tilson—I have a field of it that has stood 3 years, and is good yet. I never had red clover to stand 3 years.

The convention then adjourned.

L. R. JACKSON, *Sec.*

For the American Bee Journal.

Bees Swarming Out.

J. C. WILSON.

On April 17, I had 2 colonies of bees swarm out within a few minutes of each other, and settle near together. As I was too busy to give them attention, my brother-in-law undertook to put each swarm into a separate hive, but not being accustomed to handling bees, he soon succeeded very nicely in getting both swarms into one hive, and thinking all would go on well, except the combat between the queens, he placed the hive where it was to stand. About noon the following day I found the portico still filled with bees—I think about four quarts—and I determined to see if I could not tickle the sulks out of them, put them into the hive, and they would then go to work.

During the process of tickling, which was done with a small limb from a bush, with a leaf or two on it, I found one of the queens "balled." I washed the bees off in a basin of water and caged the queen and took her to my piazza steps, about 50 yards from the bee-yard. As she dried off I offered her honey, which she took ravenously, and I determined to pass her to another cage, which I thought better for introducing, and in so doing I let her get away. She made one circle to mark the location, and then flew away. Giving her up as lost, I returned to the hive to go on with the tickling, when, to my astonishment, I found the other queen "balled" also. After washing the bees from and caging her, I again repaired to the steps to take care of her. A moment after I reached the steps, the first queen, which had flown away about 25 minutes previously, returned. I knocked her down with my hand, then picked her up and again caged her, and introduced her to the colony, and all is going on well.

This may be no new thing to veteran bee-keepers, but to me it teaches some important lessons, viz: First, I believe the bees "balled" both queens whilst fighting, in order to save themselves from total destruction; and second, how quickly and precisely bees mark their location.

Ridgeland, ♀ S. C.

For the American Bee Journal.

Granulated and Thin Honey.

20—J. O. SHEARMAN, (136—116).

Query, No. 229 mentions granulated honey. I would say that this fact is not given due prominence by bee-keepers generally, that granulated honey is a very serious cause of loss of bees in winter and spring. Mr. H.

D. Burrell wrote me that a number of his colonies had died by reason of their stores of sugar becoming granulated. I find that the thin honey is more apt to granulate than thick, well-ripened honey, and the bees *cannot* live on it in cold weather. The granulated particles are of no use to them, and the remainder is so thin as to be unwholesome food for them in cold weather. Besides, any little warm spell will cause the thin liquid to sour, causing bee-diarrhea even after the brunt of winter has passed. I lose more bees in March and April from these causes than from all other causes combined.

Last week I found a rather small colony that actually had starved with plenty of comb honey in the hive, and only one comb removed from the cluster. They had a patch of brood as large as my hand in two combs, and I had taken out extra combs and put the combs with honey close to the brood-nest, but I did not notice that it was granulated; then a few days of cold weather came, and they could not get enough out of it to keep them and their brood warm. I have noticed others dwindling and leaving their brood-nest to starve (they would even cluster in some other part of the hive); and in every case when I cut into their honey I found it granulated.

I find that all of my colonies that wintered in good condition, and are strong, have thick, waxy honey in their hives—with no grain in it. I claim that this thin honey was gathered late in the fall, or too late to ripen well. We had a long, cool fall last year. My loss would have been greater than at present (20 colonies), but my bees had a sort of half flight in February that enabled them to get rid of some of the thin honey juice. The remedy for it is extracted honey, fed warm.

Tipping the brood over will not injure it, as Mr. H. Clark mentions on page 220. I fed a nucleus frame of comb honey last spring, by laying it flat on top of the frames of a strong colony, before unpacking them; they filled it with brood *head downward.*

New Richmond, Mich.

For the American Bee Journal.

Marion Co., Iowa, Convention.

The Marion County Bee-Keepers' Association met at the residence of Dr. H. J. Scoles, in Knoxville, Iowa, on April 15, 1886, President B. F. Woodcock in the chair. The attendance was large, and an increased interest was manifested by all.

The reports of those present gave great encouragement for a grand harvest from the labors of the blessed bees. The majority had wintered their bees in cellars or caves. The temperature was kept at from 40° to 45°, Fahr. A few wintered their bees on the summer stands. Of 292 colonies put into winter quarters 288 were reported in good condition and very strong. Several reported drones flying, and brood in frames from side to side.

Mr. Heddon's new hive was exhibited by Mr. J. W. Bittenbender, and its merits discussed. All were favorably impressed with the hive, and were unanimous in the opinion that Mr. Heddon's patent was good, and should be respected. Some enthusiastically declared that it would work a revolution in bee-keeping.

The one question of importance and interest asked and discussed was, "How shall we prevent or control swarming and yet obtain the best yield of surplus honey?"

Bees were never in better condition. The season is nearly two weeks early. Prospect for bloom of honey-plants is excellent—never was better. Count on 100 pounds of surplus honey to the colony for Marion county, for 1886. ALBERT M. BROBST, *Sec.*

Official Report of U. S. Entomologist.

Production of Wax, Feeding, etc.

N. W. M'LAIN.

Experience has taught me, in common with all progressive apiarists, that in the production of wax for honey-comb building, there is serious prodigality. Much valuable time is lost and much energy is expended, which, in view of the shortness of the honey-producing season in nearly all parts of the United States, results in a serious reduction of the possible efficiency and honey-producing capacity of bees, and a corresponding curtailment of the profits possible to be realized from the industry. To overcome this waste of time and prevent the large consumption of honey required for producing wax for comb-building, the comb foundation machine and the honey extractor have been almost universally adopted by progressive bee-keepers.

As another step in economic methods for securing the best results from the cultivation of bees, I have made some experiments in what may be called wax-feeding or furnishing wax.

The price of beeswax in the open market ranges from 20 to 35 cents per pound, according to quality, and varying with the supply and demand. Estimates can easily be furnished to prove that the production of every pound of wax costs the bee-keeper ten times the sum realized from its sale. If account be taken of the loss resulting from having the time and energies of the bees expended in wax production, instead of honey-production, at a season of the year when there is most imperative need for uninterrupted and diligent activity in honey-gathering, and of the value of the honey consumed in producing wax, and of the labor required in preserving and preparing the wax for market, it will readily be seen that the production of a pound of wax costs the producer many times the current prices realized. About 20 pounds of honey are consumed in producing one pound of wax. If a method of management can be devised and introduced by which the loss sustained in wax-production and comb-building can be still further reduced, a corresponding percentage will be added to the profits of those engaged in the industry.

I observed that if pieces of new comb were exposed on a warm day, the bees would tear off pieces of the wax and carry them to their hives for use in comb-building. I then put pieces of new comb in a shallow, square tin-pan having a close-fitting cover, and having holes in the bottom. This pan being placed on the cloth covering the comb frames in the hive, holes were cut in the cloth registering with the holes in the bottom of the pan, thus affording a passage for the bees into the pan. The heat arising from the bees produced a high temperature in the closely-covered pan, keeping the wax plastic and easily worked. When such auxiliary resources were furnished, comb foundation was drawn out and completed with great rapidity, and this work appeared to be performed largely by the young bees, aided by the field bees at night, as the comb-building progressed more rapidly by night than by day. There being no necessity for wax producing, the working force labored without hindrance during the day in the fields, and with equal energy by night in the hive. Whenever the space above the frames is not being used for superstorage, this method of furnishing wax may be employed without inconvenience.

DEVICE FOR FEEDING SUGAR SYRUP.

I have also devised a fixture for use in the brood-chamber in the body of the hive, which serves a variety of uses, and proves well adapted for the purposes for which it is designed. It consists of a wooden frame of the size of those used for brood-frames, the strips of which it is made being ⅜ of an inch thick and 2 inches wide. Parallel with the top-bar of the frame I suspend three tin troughs, one above another. These troughs are 1¾ inches wide and 2 inches deep, and the length corresponds with the inside measure of the frame. Beginning 1½ inches below the top-bar, the troughs are suspended, 1 inch apart, by means of a small screw from the inside of the end of the trough entering the side-bar of the frame. The first trough next to the top-bar has a partition, one-fifth being intended to contain water, and the remainder is used to supply honey or syrup. The second trough is used to supply pure wax shavings, and the third is used for supplying flour or meal as a substitute for pollen. These troughs should be painted and sanded inside and out, as bees do not readily get a foothold on the smooth tin. The trough for food and water is supplied with floats to prevent the bees from drowning.

This fixture, supplied with food, salty water, shavings of pure, bleached wax, and flour, I place in the centre of the colony as early in the spring as it is desired to stimulate brood-rearing, in order that the colonies may be strong in numbers when the blossoms appear. I use this device also for supplying wax shavings in the body of the hive when surplus honey is being stored above the frames, and if floats are supplied for each trough it makes an excellent inside feeder when feeding syrup preparatory to winter. The wax used is clarified and bleached in the usual manner and shaved with a sharp knife. If very thin comb foundation with shallow walls be used in the sections, a superior quality of comb will be quickly built.

I have used the same device with great satisfaction in feeding sugar syrup. A rim of tin reaching within half an inch of the cover is soldered in the holes, through which the bees enter the feeder, and a raft or float made of thin strips of wood supports the bees when taking their food. The advantages to be gained by using such a device when building up colonies in the spring, or during the working season, when time is honey, will be appreciated by those who give it a trial.

WINTERING BEES.

Each of the different methods of wintering bees, whether in cellars, in houses, or upon the summer stands, has its advocates among experienced and progressive apiarists. Success by any method depends largely upon the proper observance of a variety of conditions. Failure to comply with essential conditions brings failure by any method.

The lack of water during long confinement has been accredited with due consideration as a prime cause of the frequent severe losses in winter. Observation and experience suggests the inquiry as to whether as many bees do not perish each winter from the lack of water as from the lack of food. In the northern half of the United States bees are often confined to the hive continually from 100 to 150 days. Frequently the suffering from thirst is intense, as is evidenced by the bees going from frame to frame, visiting every comb and uncapping the honey in search of water.

I have frequently observed these chips of cell capping distributed all the way through the pile of dead bees in the bottom of the hive, and on the bottom-board, showing that the bees were suffering for water when they began to die. Perishing from thirst day by day the cluster dwindles until, a mere handful being left, they succumb to the cold.

Excessive thirst and prolonged low temperature cause what is called "roaring in the hive." Disquietude from any cause induces excessive consumption; diarrhea follows; death usually results. I have frequently quieted roaring in the hive and restored the bees to their normal condition of quietude by supplying water.

For furnishing the bees water in winter without disturbing the cluster, across the tops of two comb frames, and above the intervening space between, I place a block 3 inches or 4 inches square and 2 inches thick, through which is a 2-inch auger hole. In the hole in the block is placed a sponge dipped in water and squeezed out sufficiently to prevent the water from dropping on the bees below. The blanket being replaced, the heat from the bees prevents freezing, and usually the sponge will be sucked dry in 24 hours.

The sponge should be thoroughly rinsed before refilling. The water given the bees should be lukewarm and brackish. The salt is relished by the bees and acts as a corrective. If cushions are used above the frames, the sponge may be suspended between the frames above the cluster by means of a fine wire. A mild day should be selected for watering the bees. If after the bees have been confined 50 days a sponge full of water be given every 30 or 40 days during their stay in winter quarters, in many cases valuable colonies will be saved which would otherwise be lost. Whether the bees are to be wintered indoors or on summer stands, the arrangement of the hives should contemplate the practicability of giving water.

IMPORTANCE OF APICULTURE.

As the economic importance of this industry is more generally realized, a wide-spread and growing interest is manifested in this much-neglected branch of rural husbandry. The lack of practical knowledge is the main hindrance now existing in the way of the very general adoption of this pursuit among agriculturists, as nearly all parts of the United States are well adapted to profitable bee-keeping.

An idea of the present importance of this industry can be gained from the following figures, taken from the report of the statistician of the North-western Bee-Keepers' Society for 1884. He says: "According to conservative estimates we have now a total of three millions of colonies of bees, which annually yield 120,000,000 pounds of honey. The value of the annual product, at an average of 15 cents per pound, would be $18,000,000."

The estimated annual product ranges from $15,000,000 to $20,000,000, and the annual product of wax is about $1,000,000 in value. Not more than 8 or 10 per cent. of those favorably situated for the cultivation of bees are engaged in the pursuit. If even one-half of those favorably situated were so engaged, the annual product would not fall below $75,000,000 or $80,000,000 in value. The United States imported 2,400,000,000 pounds of sugar, at a cost of $94,923,500, in the year 1884.

A large percentage of these imports do not bring with them a character above suspicion. Instead of being importers we should be exporters of sweets, with the balance largely in our favor. Instead of paying their money for the vile adulterations of foreign importations, our agriculturists should gather the pure and wholesome nectar annually wasted in their own fields.

The degree of skill necessary to engage successfully in the cultivation of bees and the production of honey is not greater than that required in keeping a dairy and producing good dairy products. The difference is in kind, not in degree, of skill, and one is as easily acquired as the other. That reliable reports concerning this industry may be furnished in the bulletins and annual reports of the Department of Agriculture is earnestly wished for by all progressive bee-keepers. Reports giving the number of colonies in the several States and Territories on the first day of June, and crop reports of apiarian products the first day of August and the first day of October of each year, would be of very great value. The facilities possessed by the Depart-of Agriculture, through their correspondents, furnishes the best means for obtaining reliable statistics and crop reports. That such facts and statistics may be furnished in the bulletins and reports of the Department is earnestly desired.

U. S. Apicultural Sta., Aurora, Ills.

For the American Bee Journal.

Feeding Sugar to Bees.

R. F. HOLTERMANN.

The question of feeding sugar has been brought up in many lights. I do not think the apiarist can take 25 or 50 colonies in his apiary and feed them sufficient honey for winter stores to advantage, assuming that he can realize 16 cents per pound for his honey, and obtain sugar at 8 cents per pound. I have had large and somewhat extensive experience in feeding syrup, and not by any guess-work, and I am satisfied that however rapidly (rapidly it should be done to obtain the best results) the syrup is fed after the honey season has closed, the difference between the weight fed and the quantity left in the combs after the bees have quieted down, and the syrup is ripe, is astonishing. I have never attempted to feed syrup directly; at the close of the honey-flow it might be less then. I have generally fed it before frost, however. Then the idea advanced that to feed sugar syrup means so much more honey thrown upon the market, is decidedly practical, and no theory.

Again, the fact that many look with suspicion upon such quantities of sugar going to the apiary is also a sound, indisputable fact. If I were to theorize, I would account for the loss of weight as partly owing to the undue excitement of the bees when storing the syrup, the increased consumption necessary to perform the work, evaporation, etc. I should say that this revival of activity debilitated the bees and decreased their powers of coping with the coming winter. I also believe that we will yet learn that in order to enable the system of the bee to excrete and add certain constituents to the honey or syrup, they require conditions other than confinement to the hive—cool nights, perhaps, or cool days. Who will answer this question? Why does honey extracted, then fed to the bees and sealed by them, granulate in the comb, when honey in the same comb not so re-fed will not granulate?

Brantford, Ont.

For the American Bee Journal.

Cause of Loss in Winter.

L. REED.

I have kept bees for 33 years, first in the old box-hive, next in the cross-bar hive (as it was called), and then in the Langstroth hive. When I kept bees in the box-hive I had no losses to speak of. I wintered them on the summer stands without any protection, in the southern part of this State; but since I adopted movable frames I have had more or less losses in wintering.

My experience in bee-keeping in this country commenced with 4 colonies of Itatlian bees in Langstroth hives. I got them in August, 10 or 12 years ago, and put them into an out-door cellar or cave for the winter. They had plenty of good honey, and the hives had on honey-boards 1-inch thick, glued down tight. The hive-bottoms were nailed on, and there was no ventilation whatever. The cellar was 10x12 feet, and not ventilated. I took them out on April 1, and they were in extra good condition, full of bees, and young bees hatching. They commenced swarming on June 1, and swarmed twice each in June. One of the old colonies cast the third swarm on Aug. 6, something very unusual. I put them into a large box-hive and they filled it in two weeks. I put on a 10-pound box and they filled that. The 13 colonies averaged a surplus of 75 pounds each.

I put them into the same cellar in the same way, and they came out the next spring in good condition; with no loss. They all cast two swarms each, and averaged about 65 pounds per colony. I then had 39 colonies, so I had to build my cellar larger. I put them into it in about the same manner as before, and lost 2 out of 39, by starvation. The rest were in good condition.

During the third season I let them swarm as much as they would, and in the fall I had 104 colonies. I doubled some of them up so that I had about 84 colonies. I did not get as much surplus that season as before. We had a frost on Sept. 1, and I had a great many water-melons. The first thing I knew the boys were cutting them up and putting them on stumps for the bees to work on. The bees took in quite a quantity of this melon juice. I put my bees up for winter with this in the hives, took off the honey-boards and put quilts on, and the next spring I was minus 50 colonies—all died with the diarrhea; cause, water-melon juice.

The next season my bees gathered about 4½ pounds to the colony, of honey-dew or "bug-juice." The next winter I lost 33 colonies with diarrhea; cause, "bug-juice," not pollen.

One year ago I wintered my bees in a warm cellar with small loss. Last summer my bees did well. On Sept. 1 I noticed that the bees were working very strong. I found that they were working on blackberry bushes. The leaves were covered with plant-lice; they were also curled up, and the bees were taking the liquid in at a fearful rate. My bees had to go 3 miles for this stuff. My son had 2 colonies within one-half of a mile of this blackberry region, and his bees took in 30 pounds to the colony, of this "bug-juice," in about ten days. His hives were the Mitchell, with 12 frames, and they filled the frames one-third full of basswood honey, the rest with the honey-dew, to the bottom. His bees died before the first of January. They were packed in chaff. I sent some of this plant-louse nectar to Prof. Cook, and he pronounced it safe to winter bees on. He had some of it at the Detroit Convention. I sent Mr. Newman some of it, and he mentioned it on page 259. It is fermented, and can be smelled for 40 rods!

Last fall I put up for winter 51 colonies—40 in the cellar and 11 on the summer stands, packed in chaff, of which 6 died, 1 starved, and 5 had the diarrhea. The loss in the cellar was 6—1 starved and 5 had the diarrhea, caused by the "bug-juice." I have 39 colonies in good condition, except 3 or 4 that are very weak in bees. I took them out of the cellar to stay on April 15 and 16, and they brought in the first natural pollen yesterday (April 15). It has been the warmest weather for the last week that I ever have known for this time of the year. Bees were robbing badly to-day, and I had my hands full.

As far as my experience goes, I have found that "bug-juice" or late, frost-bitten honey is the sole cause of bee-diarrhea. I do not care how much pollen or bee-bread the bees have, for if they have plenty of good honey they will come out all right. Prospects are good for a large crop of honey in this locality.

Orono,⊙ Mich.

New Jersey and Eastern Convention.

A. WYE.

The New Jersey and Eastern Association met at New York, on March 10, 1886. Officers for the ensuing year were elected as follows—all of New Jersey: President, J. V. Hutchinson; Vice-President, J. T. Tucker; Secretary, F. E. Johnson; and Treasurer, C. F. Kroch.

Prof. Kroch delivered an address on spring management, saying: The first point to be determined by the novice, is the time when his principal honey-flow will probably begin; I say *probably*, because it will vary from year to year. Then he must know that, as a bee will become an active worker about 30 days from the time the egg is laid, he must begin operations about five or six weeks before to induce breeding. For this purpose he must feed each colony about a gill of sweetened water per day in such a way as will least disturb them. During the time, the bees must be confined to the least possible space by means of divison-boards. It is of no advantage to make the bees breed too fast. If the colony is weak, they cannot take care of much brood. During cold snaps they contract their clusters, and any brood left uncovered will die. It is considered best not to unite weak colonies in the spring, but to wait until some of the stronger colonies can spare frames of hatching brood later in the season.

Mrs. Dr. E. H. Mason advocated destroying the brood-combs every second year. She thinks that her bees have by this means become larger than any she has ever seen elsewhere. She also waxes the inside of her hives to save the labor of her bees, and prevents propolization by the use of palm-soap.

Mr. J. H. M. Cook, who had passed the months of January and February upon the estates of Senor Cassanova, in Cuba, gave an account of the same. A practical bee-keeper in Cuba, or elsewhere, will follow, as his highest guide, the forms and methods of nature in caring for and managing them properly. It was a singular experience for him to see bees gathering honey in mid-winter; but he had proved that bees do not cease labor for any cause other than is derived from the climate. In Cuba they gather honey every day. The principal honey-plant there is the morning-glory, and its honey is good. On Senor Cassanova's estate there were 300 colonies employed at the time of Mr. Cook's visit, and their production was 18 tierces, equivalent to 1,320 pounds of honey each, or an aggregate out-put in January and February of 23,760 pounds. In his own business, which involved 100 colonies, near Montclair, N. J., Mr. Cook used the method of reversing frames; and for the protection of his bees, he believed in the enameled cloth next to them, and chaff upon that; for thus the condensation of the air is prevented, the bees are dry, and their hives continue warm.

Prof. Kroch was in accord with Mr. Cook, and said: The water from the air will condense only on cold surfaces; if you have no cold surface, there will be no condensation. The cushion—be it of chaff or other material over the enameled cloth, keeps the heat from escaping. If an apiarist puts porous cloth, instead of enameled, next to the bees, he will find that he has gone contrary to the law of nature, because they will make it impervious to air by varnishing its entire surface; while to the enameled cloth they will do nothing except about the edges. This would seem to indicate that the air-tight covering is the proper thing.

Mrs. Dr. Mason gave her 25 years' experience. She started out with brown bees, but had so changed the character of her colonies that now they were Italian, or what might be called grades, produced by crossing pure Italians with the Germans. She did not believe in disturbing bees by noises or alarms, or by opening their hives unnecessarily. She had no difficulty in bringing them back when they wandered, but she was particular about so treating them as to leave no desire to wander.

For the American Bee Journal.

Importance of Upward Ventilation, etc.

5—CHAS. WALKER, (48).

In the fall of 1880 I bought 19 colonies of bees, and I had 1 colony that I had taken from a tree. I put them all into a good, dry cellar, leaving the hive-covers on. The bees and hives became damp, the combs moldy, and all of the 19 colonies died, leaving the solitary one, and the hive of that one had the cover off, as I was feeding it; consequently it had upward ventilation. The colony was weak and did not swarm at all, so in the fall I hardly knew what to do with it, for I was afraid that it would die if I put it into the cellar, as I did with the 19.

When cold weather came on I took the hive down cellar again, but I first packed the body of the hive with dry chaff. Imagine my surprise the next spring, when I put them out, to find that they were dry and warm. I at one time put my hand down in the chaff and I could feel the warmth from the cluster. I came to the conclusion that that was the way to winter bees, and I have not since changed my mind.

I have increased that one colony to 48, in 4 years, and I have not lost a colony. On the last day of last October I packed the hives of those 48 colonies well with chaff, and carried them down cellar, taking all the covers to the barn. Our heater is in the front room right over the bees, and it keeps every part of the cellar dry and warm. When the mercury was at 22° below zero outside, my thermometer indicated 40° above zero in the cellar.

From my experience I would not try to winter my bees without upward ventilation, as I feel sure they would all die. I simply spread a cloth over the frames and bees, and fill right over that, about 6 or 8 inches, with chaff. I would never close the hive-entrances while in the cellar. While carrying the bees down cellar last fall, through mistake I left some rags in one, and a few days later, on going down cellar, I found that the bees of this hive making a very loud noise. They were very restless, and I pulled the rags from the entrance, and on going down an hour later I found them quiet. My experience in my cellar teaches me that I must give the bees plenty of upward ventilation.

I read, on page 54, Mr. Hewitt's article on "Infallible Queen Introduction." It sounds new to me, and I shall try it and report my success or failure, as requested. I like to read such articles of information, and if they are only as practicable as they appear on paper, we can all succeed with the introduction of queens.

Our honey crop was rather light here last season, but we are hoping for a better crop this year. I increased my apiary from 24 colonies to 48, and had about 1,500 pounds of comb honey in 1-pound sections. In 1884 I increased from 10 to 24, and had 1,000 pounds of comb honey.

Bravo, ♀ Mich.

Local Convention Directory.

1886. *Time and place of Meeting.*

May 18.—Central Michigan, at N. Lansing, Mich.
E. W. Wood, Sec., N. Lansing, Mich.

May 20.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

May 25.—N.W.Ills. & S.W.Wis., at Pecatonica, Ill.
J. Stewart, Sec., Rock City, Ills.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Oct. 12–14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Robber Bees.—Wm. Anderson, Sherman, ⊶ Mo., on May 3, 1886, writes thus:

My bees are doing well now, although I had quite a time in getting robbing stopped. A little careless feeding caused all the trouble, and the loss of 2 colonies. I fed a weak colony, but they did not clean up all the feed, and I thought no more about it until it seemed that nearly every bee in the apiary was heard. I at once cleared up every thing, but the robbing had started, and it was two weeks' work to get it stopped. A lesson was learned, and will not soon be forgotten.

Best Spring for Bees.—E. T. Jordan, Harmony, +o Ind., on May 3, 1886, says:

I put 42 colonies in my bee-house on Nov. 27, and took them out on March 17, all in splendid condition. This has been the best spring for bees to gather honey that I ever knew; a great many of my colonies are ready for the sections. I shall work 25 colonies for extracted honey, and the balance for comb honey.

Bees vs. Fruit.—D. A. Dimitry, Morgan City, ♀ La., writes:

The question "Whether or not bees injure fruit," is one of great interest to the majority of bee-keepers. It seems to me that the plain and highly interesting report of Prof. N. W. McLain, on page 245, should remove all doubt, and set at rest this vexatious subject. Most of my colonies are beneath the shade of orange trees, some under peach and mulberry trees, and all within 500 feet of my vineyard. I have two varieties of grapes, one ordinary small red, the other a large, white, thin-skinned variety, very juicy and easily punctured. If I for one moment thought that my bees injured the fruit, my personal interest would compel me to discard the bees, and my 100 colonies would have to go. My experience has been, that my oranges and peaches have improved steadily, since the bringing of the first colony to my orchard. The fruit not only "holds" better, but it has improved in size as well as flavor; and brings a much better price, which is proof enough to me. As to the grapes: While I cannot say that they have improved any, still I do assert, and that decidedly, that so far not a single grape has been injured by the bees.

White Clover in Bloom.—S. J. Youngman, Cato, ⊙ Mich., on April 29, 1886, writes:

Never in the recollection of the traditional oldest inhabitant have we in Michigan had such a warm April as the one now passing into history—90° in the shade, bees gathering honey and building new comb, although the fruit-trees are not in bloom yet, but the buds are about to burst forth in great profusion. The bees are booming, hatching workers and drones very fast. The honey gathered must be from the forest trees, although wild flowers are blooming some. I saw dandelions, and plucked a white clover blossom to-day, which I send you as a sample of what Michigan can do on a pinch.

[Yes; the spring weather has come early, and seems to be "here to stay." The white clover blossom is the first we have seen, and promises early honey gathering. All should prepare for a good, early honey harvest.—Ed.]

Prospects Good in Kentucky.—E. Drane, Eminence, ♀ Ky., on May 4, 1886, writes:

Everything is lovely now for a honey crop from white clover, though our bees lost 3 weeks in March in which the queens totally quit laying, and the ate all unsealed larvæ. The weather opened nice on April 5, and sugar maples commenced to bloom immediately, and the bees have made the most of it and fruit bloom. Locust bloom will be here in a few days; then white clover, and honey. I have one of Mr. Heddon's new hives, and I think that I will like it—especially for comb honey.

Bees Doing Finely.—W. H. Tuttle, Creston, ♀ Iowa, on May 5, 1886, says:

Bees are all right, and are doing finely. I have added 11 more colonies to my small apiary, making a total of 26. In reply to Mr. R. F. Holtermann, on page 266, saying that he "would be very much surprised if the 2 colonies mentioned on page 234 as having drones, were not queenless, that is, if they were at home when seen:" They were at home, and both the colonies have good, prolific queens and are doing finely, but the drones disappeared in a few days after I first noticed them.

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Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Our New Catalogue of Bee-Keepers' Supplies for 1886 is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

Perforated-Zinc.—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at $2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19¾x14½—Price 25 cents each.

◆

There will be a Rush for supplies needed in the apiary after awhile, and we cannot do better than to urge all to look over their stock, ascertain what will be needed, and get it on hand before it is necessary for use—thus avoiding the perplexity consequent upon its possible delay in reaching them in time.

◆

Wire Nails have advanced in price, as will be seen by quotations on page 159, last column.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

◆

Alsike Clover Seed.—We can furnish Alsike Clover Seed at $8.50 per bushel—or $2.25 per peck. These prices will take the place of those published in our Catalogue, until further notice.

Convention Notices.

☞ A cordial invitation is extended to all to attend the 8th annual meeting of the Texas State Bee-Keepers' Association, to be held at Judge W. H. Andrews' bee-farm, at McKinney, Tex., on May 5 and 6, 1886. Indications for a grand meeting grow brighter every day, and every effort will be made to render this meeting the best and largest ever held in the State. No hotel bills to pay.
B. F. CARROLL, *Sec.*

☞ The next meeting of the Cortland Union Bee-Keepers' Association will be held at Cortland, N. Y., on May 11, 1886, at 10 a.m.
D. F. SHATTUCK, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Central Michigan Bee-Keepers' Association will meet on May 18, 1886, with Capital Grange at their Hall in North Lansing, Mich., to hold 3 sessions, viz: Forenoon, afternoon and evening. All interested in bee-culture are invited to attend and bring articles of the apiary for exhibition. For any special information address the Secretary,
E. W. WOOD, N. Lansing, Mich.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold their next meeting at Mr. Ed Whittlesey's, 2½ miles south of Pecatonica, Ills., on May 25, 1886.
J. STEWART, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

◆

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◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

Cash in Advance is the rule, but no longer than six months of grace can be allowed on the small sum of $1.00. Subscriptions may commence at any time, and discontinuances may be ordered at any time, when arrearages are paid up.

◆

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◆

The Illustrated Graphic News of this week will give exciting scenes from the terrible Chicago Riots, exhibiting the fearful Bomb Explosion, together with portraits of the Sheriff, Mayor, Prominent Police Officials and Murdered Officers; and other interesting illustrations, besides an abundance of the choicest reading matter.

◆

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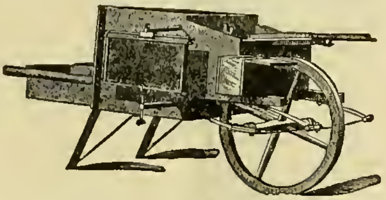

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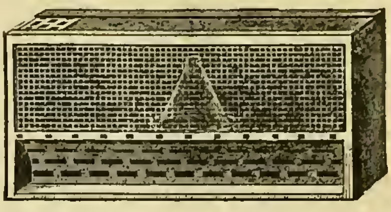

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WE have a large stock of choice yellow beeswax, and can furnish Dunham comb foundation for brood-comb, cut to any size for 40c. per lb. Extra thin Vandervort foundation, 46c. per lb. We guarantee our foundation to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20 cts. per lb. for sections.

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

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By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms ; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison ; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse ; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO ILL.

ITALIAN QUEENS.

I WILL furnish **Warranted Italian Queens-Bees** for $1.00 each ; Tested Queens for $2.00 each. Delivered by mail.

PETER BRICKEY, Lawrenceburg, Ky.
18A18t

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

THOS. G. NEWMAN & SON,
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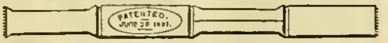
Prices Reduced.

THE "BOSS" ONE-PIECE

SECTIONS.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Patented June 28, 1881.

WE have REDUCED the PRICES on One-Piece Sections as follows :

One-Pound Sections, In lots of **500 to 3,000,** ₰ 1,000, **$4.00**

☞ For larger orders write for prices. ☜

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., April 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

LOOK! LOOK!

ALL-WOOD Langstroth Frames, same as A. I. Root's make, $1.50 per 100 ; $12.50 per 1,000. Comb Foundation, made on latest improved Mill. Heavy, in 10 or 20 lb. box, 40 cts. per lb.; Thin, 45c. Simplicity Hives, Sections, Smokers, and Supplies generally. **Pure Italian Bees and Queens** a specialty. Circular and Price-List free.

C. M. DIXON,
16W4t PARRISH, Franklin Co., ILLS.

A YEAR AMONG THE BEES,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

SOLD!

HAVING Sold the 100 Colonies of Bees offered in the March Numbers of this JOURNAL, I am now booking orders for **Nuclei Colonies and Queens Only.** Also **Bee-Keepers' Supplies.** Send for 1886 Price-List. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
14Wtf COLERAINE, MASS.

THE AMERICAN APICULTURIST
(ESTABLISHED IN 1883.)

WILL be mailed to any address for 3 months, on receipt of 25 cts. in stamps. **Sample copies free.** Address,
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DOWN, DOWN, DOWN!
We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
14Wtf **MAZEPPA, MINN.**

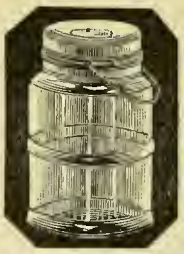
IF YOU WANT a good, well-made, durable and practical Machine, send for the

I. X. L. HONEY-EXTRACTOR.

For 2 Langstroth or square frames, only $6.50. Other sizes in proportion. Excelsior Cold-Blast Smoker, postpaid, 75 cts. W. C. R. KEMP,
17A4t ORLEANS, IND.

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	**$1.00**
" 2 pounds " "	**2.00**
" 3 " " "	**2.50**

THOMAS G. NEWMAN & SON,
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FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

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Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

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Freeman & Central Ave.. - CINCINNATI, O.
P.S.—Send 10c. for Practical Hints to Bee-Keepers

APIARIAN SUPPLIES

IN order to dispose of our large stock of Hives, White-Poplar and White-Basswood Sections, we will sell for this season at **Greatly Reduced Rates.** Send us your order for lowest cash figures before ordering elsewhere. We will guarantee best of workmanship.

THE H. F. MOELLER MFG. CO.,
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BEE Hives and Sections —Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

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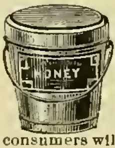
LARGE SALES—SMALL PROFITS.

THE 3rd Edition of "Handy-Book and Queen-Rearing," 300 pages, 100 illustrations, bound in cloth. by mail,.. $1 10
Book and sample latest improved Drone and Queen Trap, by mail,........................ 1 50
Book and tested queen, any race (from June to October).. 2 00
Book and warranted queen, ditto, ditto 1 75

Money Order office at Salem, Mass. Postage stamps will do for odd change. Send for Circulars.

12Atf **Henry Alley, Wenham, Mass.**

NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street. CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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The BUYERS' GUIDE is issued March and Sept., each year. ☞ **280 pages, 8½x11½ inches, with over 3,500 illustrations — a whole Picture Gallery. GIVES Wholesale Prices** *direct to consumers* **on all goods for personal or family use. Tells how to order, and gives exact cost of everything you use, eat, drink, wear, or have fun with. These INVALUABLE BOOKS contain information gleaned from the markets of the world. We will mail a copy FREE to any address upon receipt of 10 cts. to defray expense of mailing. Let us hear from you. Respectfully,**

MONTGOMERY WARD & CO.
227 & 229 Wabash Avenue, Chicago, Ill.
12A13t

Italian Bees in Iowa.

60 CENTS to $1 per lb.; QUEENS, 30 cents to $2.50. NUCLEI and COLONIES. Order from my new Circular.

OLIVER FOSTER,
10Atf MT. VERNON, Linn Co., IOWA.

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ½ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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FOR SALE.

Italian Queens.

	May.	Jun.	After
Untested,	$1.00	$1.00	.85
Six,		5.00	4.50
Tested,	2.50	2.00	1.50
2-fr. Nuclei—untested queen.	3.00	2.75	2.25

Also Bee-Hives, Foundation, etc. Send for Price List.

JNO. NEBEL & SON,
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MASS. AGRICULTURAL COLLEGE

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. May 19, 1886. No. 20.

Artificial Honey.—The late falsehoods about the "manufacture" of "artificial honey," by the religious and secular press, has led many to offer to sell recipes for making such. A correspondent sends us a circular offering recipes for sale, with the following letter:

> I enclose an advertisement of recipes. Among them is one for making "artificial honey." It is claimed that this stuff can scarcely be distinguished from the genuine article. This advertisement is from a firm by the name of Ellis, in Chicago. If there is any law for prohibiting the manufacture of such stuff, it should be put in force immediately, and this company be prosecuted.—R. L. C.

Here is what is said about the recipe in the circulars:

> ARTIFICIAL HONEY.—Equal to bee's honey, and often mistaken by the best of judges to be genuine. It is palatable and luxurious; costs 8 cents per pound, to make, and will sell for 16 cents per pound, while bee's honey sells for 25 to 35 cents. Agents make money fast selling the recipe to boarding-houses, stores, and private families at $1 each. In an average territory you can easily sell ten recipes a day, for $1 each. Ten dollars clear profit. One agent writes: "I average a recipe at every sixth house."

As Ellis only offers to sell the recipe for making "*artificial honey*," and get his agents to do the same, there seems to be no law to prevent him from doing so. He sells it for what it is—making a bogus article; an imitation!!

What *fools* people must be to buy a recipe to *make* a bogus article, an imitation, when the genuine article can be purchased for about the same price!

What a *liar* Ellis is to say that "bees' honey sells for 25 to 35 cents" per pound! Many bee-keepers would be glad to get 10 cents per pound for their crop of extracted honey in bulk.

But—just as long as people will allow the nefarious traffic of selling food which is adulterated (such as bogus butter and the like), there will be no law to prohibit its manufacture and sale! When "the people" demand that such a law be enacted and rigidly enforced, then it will be done—as it is in Great Britain and other older countries. How long it will take the people of America to "screw up their courage to the sticking point," and demand legislation to protect them from such depraved and infamous scoundrels, we know not! Meanwhile millions are being poisoned daily; by slow but sure steps, hopelessly driven to their graves by the cupidity and avarice of villainous adulterators!

◆

Outlook for the Honey Crop.—On page 314, Mr. S. F. Newman, of Norwalk, Ohio, asserts that the present season has been the best, so far, for bees, that he has "ever known," and adds: "We have had a constant flow of honey for about five weeks from maples and fruit trees, and the weather has been very pleasant. We already have about 1,000 pounds of honey, and our bees are in fine condition to take advantage of the white clover when it blossoms—the lower stories of the hives being packed full of bees and honey. We expect a very prosperous season."

Mrs. J. N. Heater, of Columbus, Nebr., says that her bees are "all booming on fruit bloom now, and some are preparing to swarm."

Alex Rose, of Sullivan, Ills., reports that his "bees are storing honey in the sections now," and that the prospect is fine for an early honey-harvest."

C. W. Dayton, Bradford, Iowa, reports the first natural swarm on May 8, and that the bees are gathering honey freely from fruit bloom.

Dr. H. R. Dorr, of Worden, Ills., reports that his first swarm came out on Sunday, April 18.

Geo. E. Hilton, of Fremont, Mich., writes thus of the good prospect: "Never in the history of my keeping bees has there been so favorable a spring as this. The weather has been of the very best. Ever since the first willow bloom there has been honey enough coming in to stimulate brood-rearing, and now we are in the midst of fruit bloom, and my strongest colonies have been at work in the surplus cases. My first swarm came out on May 11, which is 10 days earlier than I ever had one before. The prospects for a good yield were never better."

C. H. Dibbern, of Milan, Ills., adds his testimony as follows: "I have never known a season so favorable to bees as the present. They have worked almost every day since they were put out, about the middle of April. There has been no cold storms to chill the brood, and they have built up nicely. The weather is now just right for honey gathering, and the bees are improving the "shining hours" from daylight until dark; some even returning so late that they cannot find their hives; others drop exhausted at the entrances. If we have suitable weather for the next two months, we will have the finest and largest crop of honey this country has ever produced. The statement that after fruit bloom there will be a dearth of honey till white clover comes, does not apply to my locality. Bees just now are fairly booming on honey locusts, which is yielding honey abundantly. Our fruit bloom, apples, plums, cherries, etc., is immediately succeeded by the wild crab and hawthorne, of which we have an abundance. The honey locusts are only just commencing to bloom, and as we have hundreds of trees within reach, they will carry us into the white clover harvest without any dearth. Then, too, raspberries, blackberries, etc., are just opening, and that with the locusts will give the bees all they can attend to."

Other testimony is equally encouraging. Take the country all through, we think Mr. Dibbern is quite correct in saying that if the weather shall continue favorable for the next 7 or 8 weeks, we shall have "*the finest and largest crop of honey this country has ever produced.*"

◆

Home-Made Binders for the BEE JOURNAL.—Mr. Gardner H. Perkins, of Cazenovia, N. Y., has sent us a sample of one he uses, and we will attempt to describe it.

He has a cover of card-board large enough to wrap around the JOURNALS to be bound. Then runs a long pin through each end of a whalebone spring (2 inches long), and then through the cover and JOURNALS—the point of the pin is then turned up something like a meat hook. The spring holds them tight, and other JOURNALS can be added by hitching them on this hook, inside the last cover. Of course to use such a binder is better than to let the numbers be lost or soiled, but an Emerson Binder, made expressly for it, is vastly superior, and with care will last for 8 or 10 years—making the real cost only about 10 cents a year. Every one should obtain an Emerson Binder if possible; if not, then make such as is described above.

◆

Punctuality in sending the BEE JOURNAL results in its being received punctually by its readers. They always know when it will come, and do not have to make a number of trips to the Post-office for it, and sometimes be bitterly disappointed in its non-arrival. Mr. C. W. Dayton, of Bradford, Iowa, writes thus on this subject:

> I take and read seven papers, four of them bee-periodicals, but among them all, there is none so punctual as the AMERICAN BEE JOURNAL. Every Thursday morning at 9 o'clock I take it out of the office, year in and year out, and that punctuality alone is in itself a gratification worth many times the subscription price. If $5 instead of $1 was required to get it, I should take it all the same.

"System" and "order" are necessary to satisfy our patrons, and we are glad to know that our efforts are appreciated. The forms of type are closed up every Saturday afternoon. On Monday they are placed on a fast-running steam press, and even while its readers are asleep on Monday night, the presses are still rattling away for their comfort and edification. On Tuesday morning 50 girls fold up the sheets, and then they are stitched by steam wiring machines. While this is being done the addresses are printed and pasted on the wrappers by machinery, and at 4 p.m. the JOURNALS are wrapped up, put in sacks and taken away in a wagon to the General Post-Office, 3 miles away. This programme does not vary an hour scarcely once a year.

◆

Hives for increase will be needed soon. Order them at once if not already done. Also sections for the surplus honey crop, which will soon be on hand.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

QUERIES

AND

Replies by Prominent Apiarists.

The Mating of Queens.

Query, No. 251.—In answer to Query, No. 224, about the distance a queen will fly to meet the drone, is not the distance given too great? Do not the drones go part way?—J. S. B.

Very likely they meet half way.—A. J. COOK.

We said one mile. The drones probably go over half way.—DADANT & SON.

We are gradually learning a little about the subject, but I do not believe that much is known positively.—C. C. MILLER.

I think you are correct in suggesting that the drones go part of the way, and I should not be surprised to learn that their part is the greater part.—JAMES HEDDON.

I do not believe that anyone knows which does the most of the traveling. All I know is that I have had queens mate with drones reared five or more miles from my apiary.—G. M. DOOLITTLE.

In all probability they do. If you will throw fine flour on some drones, after noon, you will find that they will be absent from one to two hours, giving an opportunity to go a long distance. But this is all guess-work.—H. D. CUTTING.

This is a subject of which I *know* but little, except that queens have mated with drones from hives at the distance mentioned.—W. Z. HUTCHINSON.

To the first part of your question I think I should say yes. I have good reasons to believe that virgin queens rarely, if ever, go out of the range of vision from their homes. I feel sure that this is the case as a general rule. The case is different with the drones. I could not find room to discuss the matter here, but nature has evidently imposed the greatest risk upon the drones.—G. W. DEMAREE.

Yes, queens never fly very far from the hives, probably never more than one-half of a mile. The drones not only have powerful wings, but are able to maintain for two hours at a time, without rest, their wonderfully rapid flight, and traverse over miles of country. The wing-power of the worker bees will never fail with such matchless winged sires; especially since the male is prepotent over the female offspring.—G. L. TINKER.

Answers to this query are all theoretical. It is assumed with some show of proof, however, that drones have a particular place of congregation, and the queens are met by them there. In the present state of knowledge this idea is as good as any. The facts can only be determined by thorough tests.—J. E. POND, JR.

Room for Surplus Honey.

Query, No. 252.—In using the Falconer chaff hive, how many sections would it be best to use on top of the brood-frames—a rackful holding five rows of nine each, one holding four rows of 8 each, or four rows of 9 each?—Ohio.

Thirty-six sections above the brood-chamber is the number most generally in use.—W. T. FALCONER.

I never have used the hive named, but I suppose it would depend on the strength of the colony and the size of the sections. A good, strong colony ought to take five rows of nine each, if 1-pound sections are used.—C. C. MILLER.

I never have used the Falconer chaff hive, but I have had the best success with 3 rows of 8, making 24 sections to the rack, and tiering up 2 and 3 racks high.—H. D. CUTTING.

I should cover the entire brood-nest with sections.—W. Z. HUTCHINSON.

Either would do, but I prefer a surplus arrangement which would allow of putting on 2 rows of 8 each, and in a week another 8, and so on until all the room is utilized. The putting on of the whole surplus-room at the start often discourages the bees.—G. M. DOOLITTLE.

I prefer to tier up the sections, and I object very decidedly to such large section-cases. For the ordinary pound section, four sows of 5 or 6 each are enough under all circumstances.—G. L. TINKER.

I do not know the size of the top of the brood-nest of the Falconer hive. I prefer a section-case made just the size of the top of the brood-chamber, and made so that the sections will run parallel with the frames. The length of the case can be regulated to suit the length of the hive by nailing cleats on the ends, if necessary. A case holding 32 sections suits me best for tiering up.—G. W. DEMAREE.

I have never used the Falconer hive, but it will depend upon the honey-flow. When honey is being gathered in large quantities give ample room; when in less degree, give less; in fact, proportion the room given to size of colony and amount of honey being gathered, and you cannot go far wrong.—J. E. POND, JR.

Reversing Frames.

Query, No. 253.—In reversing frames, do the bees not have a great amount of extra work to do in changing the cells? Most of the combs of brood that I have noticed, on the upper side, have a strip of honey, and the cells dip towards the centre. I would think that in reversing the combs, if the honey was very thin, it would run out. Do the bees change the the angle of the cells?—Oregon.

I do not believe that the bees change the angle.—C. C. MILLER.

All the experience I have had was in reversing sections. This causes the bees extra work, for the reasons given in the query.—G. M. DOOLITTLE.

I do not think that any such change is made, and certainly the honey does not run out. I find that I get more honey, and such facts are worth oceans of theory.—A. J. COOK.

I think not. No nectar is thinner than that gathered from fruit-bloom, and it will not run out of the combs until they are held nearly horizontal. Even when water is poured into a comb it is pretty hard to shake it all out.—G. L. TINKER.

In transferring combs I frequently put the top side of the combs down and the bees seem to fix the cells all right. The thin honey will sometimes run out when handling the combs. Inverting combs will never give a great deal of trouble, for the simple reason that practical bee-men will soon learn that it does not pay to reverse combs or hives for practical purposes.—G. W. DEMAREE,

All the work the bees are induced to perform by reversing, is profitable work for the bee-keeper. No, the bees do not change the pitch of the cells, nor does the honey run out.—JAMES HEDDON.

1. Yes, most certainly, and also in conveying the stores to the upper story, as it all must be moved a second time. 2. Yes, at times, but the idea of the reversionists is, that the frames will be re-reversed in a short time. The whole theory of reversing is against nature and natural laws.—J. E. POND, JR.

I have never noticed that the bees changed the angle or "dip" of the cells, and the thin honey does *not* run out. But let us suppose that the bees did change it, and that it caused them a great deal of work, what would we care if better *results* were secured? It is the "results" that we are working for, and not to save the bees from labor.—W. Z. HUTCHINSON.

Convention Notices.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold their next meeting at Mr. Ed Whittlesey's, 2½ miles south of Pecatonica, Ills., on May 25, 1886.
J. STEWART, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it, the prices are reduced, as follows:

For 50 colonies (120 pages)...........	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ~O northwest: O~ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Superseding of Queens, etc.

G. M. DOOLITTLE.

The question is asked, "How do bees know when to supersede a queen?" and as the time of such superseding of queens is near at hand, perhaps a few words on the subject may not be uninteresting.

After a careful watching of all cases of supersedure of queens which have come under my notice, I am led to believe that the bees, as a rule, supersede a queen on account of her ceasing to be as prolific as she has been heretofore, and especially is this the case where the attempt is made to replace the old queen previous to swarming, or immediately after the prime swarm has sought a new abode, say during the first two weeks after the swarm has been hived.

In all of the cases of supersedure which happened at the times above mentioned, the queens were failing, and soon died, nearly always before the young queen began laying, so that I had positive evidence that the fewness of eggs laid by the queen was the real cause of her being replaced by another from her brood. Later in the season, however, the evidence that the bees know at all times what they are about, is not so great; thus we have exceptions to some of the rules regarding the workings of our pets.

During the latter part of August, in 1872, I found that the bees were bent on superseding one of my very choicest queens; so as fast as they got the queen-cells capped I removed them. While cutting out these cells one day, having a friend with me who kept bees, we found a nice young queen which had hatched from an unobserved cell, at the sight of which he said he would give me $2 for the old queen and take his chances on her. As he was an apiarist of considerable experience, I thought he knew what he was about, especially as I had explained the whole matter to him; so I let him have her. He took her home, succeeded in safely introducing her, and to the surprise of both of us, she lived and did good work for two years, he rearing scores of queens from her. This proved to me that the bees made mistakes sometimes.

Another case coming under my observation, showed a still worse blunder on the part of the bees. In the fall of 1880, as I was preparing my bees for winter, I found two queens in a hive, the mother having her wing clipped. They were left to see what the result would be. In the spring both were there and soon had the hive full of brood. One day Prof. Boynton (who exposed the "Cardiff giant" fraud), called on me and I showed him the two queens, both on the same comb, which seemed to be a great curiosity to him. After he returned home he sent me a high price for the colony, as he wished to study into the matter, but when I went to prepare them for shipment, I could find only the old queen in the hive. After a short search in front of the hive I found the young one where the bees had drawn her out. The old one failed fast, and was only able to lead out a swarm (from the brood of the two) before she died. These are the only two exceptions to the rule, which I have found.

BEES DYING ON THE SNOW.

Another asks, "Is there any way to prevent bees from coming out of their hives and dying by the hundreds on the snow?" In answer to this I will give my plan to prevent such loss, but first I wish to say that there are two causes for bees acting thus; one of which is bee-diarrhea, and the other the direct rays of the sun in and about the entrance. If the former is the cause, the bees might as well die on the snow as anywhere, for die they will; but if the latter, the cause should be removed by shading the hive.

As the sunshine is apt to entice all bees out more or less, I always, at the beginning of winter, lean up a wide board, nearly as long as the hive is wide, in front of the entrance, which not only keeps the sun from enticing the bees out when it is too cold for them to fly, but shields the bees from the cold winds which would otherwise blow directly in at the entrance. Whenever a light snow falls I sweep the snow up over this board and still higher up on the hive, which gives additional protection. As this takes but a few moments I consider that I am well paid for doing it.

There is one point wherein some are deceived regarding dead bees on the snow. Bees can rise as safely from melting snow as from bare ground, if the air is only warm enough. The degree of warmth required I find to be 45° in the shade, providing it is still, with the sun shining; yet with even a warmer temperature the snow will often appear covered with dead bees. A little careful watching will show that these dead bees are those brought from the hive and dropped by the other bees while they are "house-cleaning;" this house-cleaning is always going on when the weather will permit of a flight. Again, 100 bees will make more show on the snow than as many thousand would on bare ground. For this reason we are often alarmed when there is no occasion for it.

Borodino,⊙ N. Y.

For the American Bee Journal.

Are Bees Taxable Property?

T. B. BLAIR.

I should like the above query answered in the columns of the BEE JOURNAL. So far as I know, bees have never been taxed in this locality, but I have been informed by an officer of the town in which I reside that my bees will be assessed this year. I am willing to concede the right to tax hives and other fixtures of that kind, as well as merchantable honey on hand at the time the assessment was made; but in my judgment colonies of bees are not taxable any more than are dogs. They might put bees on the same plane as dogs, and require bee-keepers to take out licenses (when the legislature enacts such a law), but it seems to me that our tenure of property in bees is so uncertain that it would be difficult to assess them. I may have 50 colonies on May 1, when the assessment is made, and lose half of them before clover comes; I may put them in in the fall and lose ¾ of them before spring (as I did two years ago); or my colonies may come out so light as to be valueless, while my neighbor may have his in good condition, but the average assessor would value all alike.

I should like to know the practice in other States in this matter, and if there is a lawyer among our brotherhood I should like a legal opinion upon the matter as early as can be convenient. I believe it to be a matter of interest to all bee-keepers.

From what I hear at this date bee-keepers have lost heavily in this and adjoining counties the past winter. My bees came out in good condition. I lost 6 colonies out of 60 put into the cellar.

Neenah,O+ Wis.

[Your query will be duly submitted and answered in the Query Department in due course.—ED.]

For the American Bee Journal.

Temperature Inside of the Hives.

WM. F. KANZLER.

In preparing my bees for winter last autumn, I arranged an average colony so that every day I could read on a thermometer placed at the inside of the hive, the degrees of either heat or cold; for I do not believe in guessing, and I am not so full of vanity as to think that I know the temperature or dampness of the inside without the use of a thermometer or hygrometer.

To do this so that I should not jar the hive and molest the bees in cold weather, I procured an elbow-shaped thermometer, the shorter part of which is 5 inches long and bent in a right angle; then I cut a ½-inch hole in the sheet of burlap lying over the frames, and bored with a ½-inch hole right over the winter cluster, and plunged the short end of the thermometer through this hole into the hive about 5 inches deep, so that the longer end would lie flat over the frames. Over the thermometer I laid 4 sheets of wadding to keep the bees warm, and then placed the cap on the hive.

The cap is roof-shaped, 6 inches high on the sides, and moves very easily. My hives are like Mr. Dadant's, holding 13 or 14 of American frames 12 inches deep, and standing in a shed on the east side of my smoke-house, so that the hives can be worked from the rear; in the front I place bundles of corn-stalks to keep rain and snow off, and between the hives I pack dry wheat-straw, the ends of the shed being closed with boards.

When I want to know if my bees are comfortable or not, I enter the shed by a door on one end, take off the cap without a knock or jar, lift the wadding, and the thermometer lies before me and shows, to my great joy, without opening the hive or molesting the bees, that the bees are in better circumstances than the birds in the open air. On Jan. 12—the coldest day—the thermometer showed +70° in the inside of the hive, and —22° in the open air; on Feb. 5, inside, +41°, and outside, —4°. I live in latitude 38° 8' north, and I shall not take it as a personal insult if the thermometer of another observer in a higher latitude shows another number of degrees, or if some one else makes other conclusions than I do. Until to-day the mercury never was lower in the inside of the hive than 32°, and that only for two days, on Feb. 16 and 17; and to find out if the bees were sleeping or awake, in closing the cap one day, I let it down not very carefully, and it gave a light jar, and one hour after the thermometer showed 2° more. In finding that the temperature changes almost every day, and sometimes in opposition with the outside air, *i. e.*, when the outside temperature lowered the inside temperature advanced, I concluded that the bees must be in motion to create this warmth; and besides this, old naturalists and close observers in the old and new worlds told us long ago (see Langstroth's Hive and Honey-Bee, page 335) that they marked their bees in an observatory hive with different colors, and in watching closely, they found that the bees were moving in the coldest weather; that those which were on the outside of the cluster could be seen in a few days on the inside. I never doubted these statements. and therefore I did not open my hive, and made no glass doors to it. I desired only to find out the temperature of the inside of the hive for my own information and to satisfy my curiosity.

As given in the *Bienen-Zeitung* of Nordlingen, for 1885, page 245, at the last meeting of the German-Austrian Bee-Keepers' Society, at Liegnitz, in Silesia, the Rev. Schœnfeld—the greatest scientific bee-keeper in Germany—said: "We know as a certainty that bees in their winter cluster are in a constant rotation, so that bees which are to-day on the right or left side, may be to-morrow in the comfortable warmth in the centre; and others which hang to-day on the lower part of the cluster, may be to-morrow close by the honey-cells; here they fill their honey-sacs, then go down and hide in a cell and have a store for days; it is not necessary for them to go up very soon, and they are so sheltered against hunger and cold."

Perhaps the climate in Germany is different from ours, but the advocates of hibernation should make the same experiments; mark their bees, plunge one or more thermometers into their observatory hives, and then they can see if the bees are moving, asleep or hibernating. To give all of my observations would require too great a space, therefore I will give only the highest and the lowest temperature of the inside of the hive for each month, commencing with Oct. 23, 1885, and taken at 8 a.m. It is as follows:

	Inside temp.	Outside temp.	
Oct. 23, 1885,	+87°	+44°	highest.
" 31, "	+64°	+40°	lowest.
Nov. 7, "	+75°	+63°	highest.
" 27, "	+52°	+31°	lowest.
Dec. 1, "	+56°	+39°	highest.
" 11, "	+46°	+21°	lowest.
Jan. 13, 1886,	+81°	+ 5°	highest.
" 31, "	+50°	+48°	lowest.
Feb. 10, "	+60°	+45°	highest.
" 16, "	+32°	+ 7°	lowest.
" 17, "	+32°	+16°	lowest.

Fulda, ♀ Ind., Feb. 25, 1886.

Read at the New York Convention.

The Apicultural Outlook.

L. C. ROOT.

In my address at the last meeting of the North American Bee-Keepers' Society, held at Detroit, Mich., in December last, I gave what seemed to me to be some facts, and offered some suggestions as to the future of bee-keeping.

Very close observation during the sessions of that convention, as well as careful study since that time, have confirmed me in the conclusion that many points in that essay were well taken. I think that I may safely say that no one point is more thoroughly established by the experiences of all, than that we need to bend our best energies to the consideration of the disposition of our products. We must have a firmer, more certain, and a larger demand for our honey.

It seems to me that if any country should represent the "Promised Land," and "flow with milk and honey," it is this land of ours; and I believe, that as milk and its products are among the best and most desirable—yes, indispensable articles of food, so surely will honey, in various forms, become equally prominent as a sweet.

Already we begin to see that for many purposes honey is found to be the cheapest sweet that can be used. Mr. C. F. Muth, of Cincinnati, Ohio, tells us that pork-packers, and others who have been using cheap molasses very largely, find that though honey costs more per pound, it contains a greater sweetening capacity and is cheaper for their use. I am thoroughly convinced that the value of honey as a pure, wholesome, and natural article of food is yet to become more fully appreciated and understood. It is purely a natural product, as entirely so as milk, with which it has been associated since Bible times, and the day will come when manufactured sweets cannot compete with it, as a common article of food, and for medicinal and manufacturing purposes.

The great question for us to consider at this time is, in regard to the best methods of securing as substantial a market for our productions as for other essential commodities. We have stern facts before us, and we must meet them fairly. Many are looking to us as authority, as to the desirability of engaging in bee-keeping, and we should not fail to respond to this inquiry. Is it not a fact beyond dispute that with the present limited demand for honey, there is already an over-production? The outlook from all directions leads me to the conclusion that bee-keepers must at present be governed largely by the demand for their products, in their own locality. If you have no home market at prices which will pay you to produce honey, do not expect to ship it to distant markets with better results, while they are already overstocked.

While there will always be a demand for comb honey for table use, the great bulk of our honey in the future will be taken with the extractor, and be used for a greater variety of purposes. We must reasonably expect to compete with other sweets in this direction. To do this we must resort to methods which will enable us to produce our honey much more cheaply than we have yet been able to do. We must be able to winter our bees more successfully. In this item alone, the saving would be very great. If the present losses in wintering could be avoided, and our colonies all be populous at the beginning of spring operations, we should reduce our expenses one-half, and treble the quantity of honey obtained. But upon the demands which are created for our honey, will depend the future of bee-keeping; and to further this end, we should bestow the most thorough study and application.

One great lack in our present methods of marketing, is that those who handle our honey are not thoroughly enough versed in bee-keeping in all its branches. From careful observation I am satisfied that no one thing contributes more to the success of honey-dealers than the fact that they have an extended knowledge of bee-keeping, and are entirely alive to its best interests. We need specialists in this department of our business who would command the support of the general bee-keeping public, which they could only do by working faithfully for their mutual interest. Shall we prove ourselves equal to the emergencies of the time, and by massing our forces upon these important points, prove by our success that "in union there is strength?"

Mohawk,♂ N. Y.

For the American Bee Journal.

Words to a Honey-Bee.

FRANCES J. M'CONOUOHEY.

Little busy, wandering sprite,
That cometh, goeth thro' the hours,
O'er the garden, through the grove,
Ever murmuring of thy love
To the nodding, smiling flowers,
Whom thou wooest, bronze-mailed knight.

Thou knowest the lily's dwelling-place
Among the fern leaves moist and cool,
And where the stately goldenrod
Sways lightly ; where blue asters nod ;
Where cardinals grow beside the pool,
And the violet hides her face.

Solomon, of the insect world,
Master-workman of the winged clans !
Proud human architects, of thee
Have lessons learned—and we may see
Philosophy in all thy plans,
Even when ruin 's on thee hurled.

For, when the ruthless vandal—man—
Hath robbed thee of thy hard-earned spoil,
Thou sittest not down to growl at *luck*,
But with grim, persevering pluck,
And patient, earnest, cheerful toil,
Soon bringest thy fortunes to the van.

For the American Bee Journal.

Wintering Bees in Warm Cellars.

C. THEILMANN.

In Mr. Barber's essay on "Wintering Bees in Cellars," page 809 of the AMERICAN BEE JOURNAL for 1885, some interesting as well as very queer ideas are mentioned. How Mr. Barber can winter his bees in a cellar at a temperature from 65° to 90° above zero, is surely a marvel to many of our best and most experienced bee-masters. I would be much araid that any one would make a complete failure of it, in trying to winter his bees in a cellar with so high a temperature. One of our most practical bee-keepers tried the experiment a year ago last winter, and thereby lost nearly all the bees he experimented with. Now if Mr. Doolittle could not winter his bees in a high temperature what could we expect of the inexperienced ?

Would not Mr. Barber's essay mislead many bee-keepers, if we did not have Mr. Doolittle's sad experiment in the winter of 1883-84 ? What did we learn from Mr. D. ? Turning to page 356, of the AMERICAN BEE JOURNAL for 1884, we find that he had heavy losses in wintering his bees in a temperature from 50° to 60°, and higher. Heretofore, and after trying outside wintering awhile, he built an under-ground bee-cellar in which the temperature was kept at 42°, and therewith he wintered his bees successfully, until the above-mentioned winter, when he put faith in Mr. B's ideas ; but he durst not go the whole 65° to 90°, and tried it first with 50° above zero, with the above-stated result.

When Mr. D. saw what was coming, he wrote to Mr. Barber for information on temperature, etc., during the winter. He replied that he could not tell him anything about it, as he had no thermometer in his cellar. I do not want to criticise Mr. B's statements, and yet I do like to get at facts and not have so an important a point (in fact it is the one of success or failure in our pursuit) handled so carelessly or ignorantly. How could Mr. Barber know the temperature in his cellar if he did not have a thermometer there through the winter ? Mr. Barber says on page 11 of the AMERICAN BEE JOURNAL for 1884 : "Hundreds of bee-keepers will raise their hands in horror when told that my bees were wintered in a temperature of from 65° to 90° of heat !" How is that ? Why could he not state the temperature to Mr. Doolittle ? Because he had no thermometer in the cellar, though he still says on page 292, of the same volume, that his bees that were so heated, separated all right, etc. They were surely *smart* bees, when before they were in a cluster 5 feet in height, as he tells us on page 408 of the same volume ; and on page 264 he says, and very reasonably too, that he does not think it necessary to keep the temperature at 65° to 90° above zero in bee-cellars, but finds after the winter's experiments, that with ventilation at the top of the hive the bees were in much better condition, and came out in as good condition as when put in for winter. By thus wintering he has had no trouble since. But Mr. B. did not stick very long to the ventilation on top of the hive, as he speaks in his essay of "no upward ventilation," but adheres to 60° to 90°—perhaps without a thermometer.

On page 235 of the AMERICAN BEE JOURNAL for 1885, we find that Mr. B. really made tests during the winter of 1884-85, which showed 47° on Dec. 20, 1884 ; 45° on Jan. 20, 1885, and 48° above zero on March 30, with 200 colonies in the cellar. Now where does the great difference in his cellar come in ? I will let the readers answer this question. I would also like Mr. B. to explain it.

On page 316 of the AMERICAN BEE JOURNAL for 1885, Mr. B. comes down one-half of the 90° above zero, and says : "In a cellar as good as mine has been—45° to 48°—bees should be placed one foot or more above the cellar bottom ;" and he tells us on page 422, of the same volume, that every colony is alive and in a flourishing condition. I have no reason to doubt it in the least, as we have a number of writers who winter their bees in a temperature from 45° to 50°; but when we come up to 60° and more above, the bees become restless and lose that quiet state which is so much desired by experienced bee-keepers, and which Mr. Clarke calls hibernation.

I will now describe the experiment that I made in February, 1883, when about the middle of the month we had a warm spell. On the last and warmest day I went away in the morning, and did not return until about 4 p.m. Hastening to the bee-yard I could hear the bees roaring in my double-walled bee-house 3 to 4 rods distant ; and when I tried to enter the house, the bees came rushing out as if it was swarming time. I immediately shut the door, but I had a look at the thermometer which indicated a temperature of 65° above zero. There was a little door in the gable end of the house through which I went in on the upper floor, and lifted up the boards by which a clear space of 17 inches was made, and the entire length of the house, to let the heat escape under the roof. I then waited for the night to come to open the doors. The upper and lower ventilators had been open, but the outside air was too warm to cool off the inside air much. When night approached I opened the doors. The sight and my feelings I can hardly describe. When I got into the house, the hives, walls, floor, and everything in the house was covered with bees, crawling one over the other, apparently suffocating, and thousands of dead ones all over. The air in the house had a very disagreeable gassy smell, with the thermometer at 63°. These 130 colonies were all quiet at 42° three days before this. but from this on they were restless until I put them out, about four weeks afterward. The house was 16x18 feet, by 7 feet high.

I have no desire for another such experiment, and on account of it I have read Mr. Barber's articles with suspicion, I must acknowledge. On account of my experiment I have written this article ; also because my bees winter best in an under-ground bee-house in a temperature of 42° above zero ; and to warn bee-keepers to be cautious about wintering their bees in a temperature of 65° to 90°.

Thielmanton,⚬ Minn.

An Apiary in New Zealand.

The following is from the *New Zealand Herald* of March 6, 1886 :

Amongst the several rural industries now being carried on at Matamata, there is none more generally interesting to visitors than that of apiculture. Bee-farming has now become an established industry in England, America, on the Continent of Europe, and in Australasia, and deservedly so, for very few industries connected with rural pursuits have made greater progress during the last few years, or shown better results when systematically carried out. The importance of apiculture as an industry attracted the attention of Mr. J. C. Firth, who, with his characteristic enterprise, started the nucleus of a bee-farm some 3½ years ago, with Mr. Hopkins, the well known apiarist, as manager. The result has proved the good judgment of Mr. Firth, for instead of the whole of the honey that is secreted in the clover blossom now "wasting its sweetness on the desert air," as formerly, many tons are annually harvested, which finds a ready market, at a remunerative price. There is one thing worthy of mention, viz: The honey produced at Matamata is, without doubt, equal to the best produced in any part of the world.

Connected with the management of the apiaries, of which there are two at present, there are two substantial buildings—one containing a large workshop, in which the hives, frames, and other appliances are made, a honey-room for storage of honey, a fumigating room, and an office. The first thing that attracted our attention on entering, was the large stacks of 2-pound tins of honey—nearly 10,000. These had been brought from the principal apiary, and were ready for soldering, preparatory to being labelled and cased for market. At the time of our visit the season's crop of honey was nearly all in, and this will amount to about 10 tons—the product of 200 hives—an average of 100 pounds per hive. In the fumigating room, which for the nonce had been turned into a wine room, we were shown a number of casks containing fruit wines, mead, cider, and vinegar in a state of preparation. These had been made principally with honey, and gave promise of turning out excellent in quality. The honey used in their manufacture had all been obtained by washing the cappings of the combs; the portion shaved off before extracting the honey from them, and which is useless for market.

Mr. Hopkins, the manager, is of the opinion that were mead, honey and fruit wines, honey-vinegar, and other such-like products obtainable, an immense demand would soon spring up for them. We have no doubt that this might be made a very profitable branch of bee-keeping if bee-keepers would but turn their attention to it. It would not only be the means of utilizing a vast amount of surplus honey, but a great benefit would be conferred on humanity by placing within reach some wholesome, health-giving beverages in place of the vile compounds now sometimes sold as wines. There is no reason why we should not again revive some of those ancient beverages, such as mead, metheglin, miodomel, so highly prized when honey was considered as an indispensable article of food for man, before sugar took its place.

The other building is used for manufacturing comb foundation. Four of the latest and most improved machines for making it are in use at Matamata, and, in fact, everything that can be devised for purifying the wax and manufacturing a first-class article.

The home apiary, situated near to the manager's house, is a small one of about 30 colonies, principally devoted to queen-rearing. Here we saw a large number of miniature or nucleus hives, in which the young queens are reared and kept until they are required. Until quite lately none but pure Italian bees were kept and bred in this apiary, but in December last pure Cyprian queens were imported. These for the time were located here for the purpose of having the young queens reared from them mated by Italian drones, as the progeny from this cross are now considered to be the best working bees cultivated.

The "Burwood Apiary," situated some 2½ miles from the "Home Apiary," is devoted to honey production. The hives—about 200 in number—are in long rows in an enclosure of about an acre, surrounded by pine trees, and are well sheltered. The extracting house, where the honey is extracted from the combs, stands nearly in the centre of the apiary. At the time of our visit extracting was going on. From the extractor—which stands on a platform about 4 feet above the floor—the honey runs into a triple strainer and from there into the honey-tank, capable of holding 3,000 pounds. Here it is allowed to remain for a day or two to get thoroughly ripe, when it is skimmed and run off into tins for market.

One peculiarity about the Matamata honey is its rapid granulation and very fine grain. In the hottest weather it granulates in about three days from the time it is extracted, and in more than one instance this season it would not run from the tank 36 hours after being taken from the comb. When placed in a dish on the table its color and grain gives it the appearance of butter, from which it is sometimes difficult to distinguish it.

Mr. Hopkins informed us that the past season has been a fair one throughout New Zealand for bee-keepers, and that he estimates the season's crop at over 300 tons for this colony. He thinks the Auckland province alone will have produced nearly one-half of that quantity. Altogether, we look upon the industry of apiculture as one of much importance to the State, and well worthy of any indirect encouragement the State can give it. We congratulate Mr. Firth on his enterprise and the example he has set to other colonists to "go and do likewise."

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For the American Bee Journal.

"A Year Among the Bees."

N. W. M'LAIN.

This is the title of a new book on bee-keeping, by Dr. C. C. Miller, of Marengo, Ills., published at the office of the AMERICAN BEE JOURNAL. In his introduction the author explains that he has no expectation or desire to write a complete treatise on bee-keeping, but rather to speak of such things in detail as would come within the experience of one who, being interested in the industry of bee-keeping, should remain with him during a whole year.

The design of the author is that the book shall consist of "A talk about some of the implements, plans and practices of a bee-keeper of 25 years' experience, who has for 8 years made the production of honey his exclusive business." Among other excellencies this book possesses the rare merit of being just what it professes to be—simply a plain "bee-talk, wherein I shall try to tell honestly just how I do, talking in a familiar manner about such things as have come within my own experience."

The talk begins with the spring of the year, when "the bees can get out on the first good day," when the red of the blossom on the soft maple actually begins to push forth, and progresses by seasonable stages throughout the year, telling all about spring management and preparation for the honey harvest; the methods practiced and devices used during the working season; the care of the product and its preparation for market; the prepartion for winter; the winter repository; placing the bees in winter quarters, and the attention given them during winter; not neglecting to speak of the work which should be done during the winter preparatory to the coming year.

Moreover, during the narrative the *dramatis personæ* are naturally introduced, and we are told of the division of labor, so that each of the assistants may become proficient in the parts to which they are assigned, or for which they have a preference; and both scene and incident are so clearly and faithfully presented that one may almost imagine himself seated under a tree near the apiary and shop, the long rows of hives standing in pairs to the right, the comfortable dwelling and the orchards to the left, and the genial Doctor in the foreground narrating his monologue, "A Year Among the Bees." (The writer has had the pleasure of a *day* among the bees, with Dr. Miller at his home.)

In bee-keeping frequent emergencies arise. There is "a world of comfort" in being equal to an emergency. If one does not feel entirely equal to an emergency, there is a feeling of satisfaction and security in knowing that you have an adviser at hand upon whose experience and counsel you can rely. The author of this book is a progressive bee-keeper whose methods and practice are safe and conservative. When a progressive bee-keeper of 25 years' experience, and one who makes bee-keeping his exclusive business, gives to the public his methods and practice, the service cannot fail of appreciation from all those engaged in the industry.

The bee-keeper of experience will find many valuable hints in this book, and it is noticeable that most of the devices recommended and used are simple and cheap, and mostly home-made, and well adapted for the purposes for which they are recommended. Beginners in bee-keeping will find that the adoption of the methods, devices and practices here recommended will save them from investing in much costly experience. Experience is frequently worth what it costs, but more frequently the amount invested by original explorers in the field of bee-keeping fails to declare satisfactory dividends.

Bee-keepers of experience do not need to be told that it is prudent and wise to glean from the experience of others, and incorporate into their own methods and practice all that their judgment commends. Wisdom dictates to those lacking in experience, the adoption of methods, devices and practice which have been tried and approved, as the only safe course. Experiments with new devices or in new methods should form no part in the curriculum of those just matriculated.

This prescription written by the Doctor, for bee-keepers, he assures us he has tested in his "own experience," and surely he must be a good doctor who takes his own medicine.

U. S. Apicultural Sta., Aurora, Ills.

For the American Bee Journal.

Quietude, Semi-Hibernation, etc.

WM. F. CLARKE.

I read somewhere lately about a certain family, old-fashioned enough to have a lot of children in it. The children were making a great noise, when a big brother said: "Let there be perfic silunks!" which was obeyed *instanter!* Our Editor has shut down "all of a suddint" on "hibernation" and "reversible hives." An exception is made in regard to explanations called for by previous articles published.

I have nothing written on either of these topics, but under the exception allowed, there is only one thing I wish to say about hibernation. I have said it before, but no attention seems to be paid to it by several writers on the subject. It is that hibernation is not one certain, fixed, unalterable state, but admits of and exists in various degrees. For the truth of this statement I have cited the greatest entomologist of the age, Prof. Kirby, and once more calling attention to it, I am content to let the subject hibernate.

But I ask as a special favor the publication of the following letter, which is altogether too good to be condemned to hibernation in one of my pigeon-holes:

MR. W. F. CLARKE:—On page 232 of the AMERICAN BEE JOURNAL, Mr. W. Z. Hutchinson appears to think that if bees hibernate at all, it must be in a state identical with that of ants, etc.

We know that some insects may freeze solid and yet live, but if a bear, or Mr. Malone's ground-squirrel, should once freeze, I do not believe they would ever move again. If bees do really hibernate I think it must be another one of the many different kinds of hibernation. If bees are only quiet during the long periods, then they are the greatest exceptions known—entirely too great. If bees are only quiet, I think that either of the terms, quiet, quiescence, or quietude, is no name for it. It is neither usual quietness no ordinary hibernation.

Mr. Taylor's cattle and poultry under the barn were quiet; almost any thing may be quiet for a short time, *i. e.*, practice quiescence, and it may properly be called quietude; but it is very different from the quiet condition entered into by the bees. This is a separate condition, and should not be loaded upon its neighbors. I believe that the quietude of the cattle was as far from the quietude of the bees as was the quietude of the bees from torpor.

It would be better to coin a new word than spoil a good, useful, and respectable word in making a "catch-all." We have the condition; we are sure of that; but we ought not to call it what it cannot be proven to be. I would be satisfied to call it simply hibernation—not so profound as to embrace torpor.

Mr. Heddon, then, may say—Use my *semi-hibernation*; but we cannot do this very well as there are so many varying degrees between the conditions of the frozen ant and of the raccoon (or perhaps the bees) that a correct classification might need to be carried out to sixteenths or thirty-seconds, instead of halves and quarters; there would need to be a fixed zero point, and undoubtedly the condition of bees would best represent it.

On the whole, the hibernation theory, though it be ever so true, is too new, too shocking; it may work better when a little older; ordinaries could not swallow it at this time if it were ever so palatable. "Its agin natur." "It takes years to accomplish a great object." So much of truth as your theory contains must come uppermost.—C. W. DAYTON, Bradford, Iowa.

Many thanks, Mr. Dayton, for the foregoing communication. The hibernation theory has made wonderful progress considering the shortness of the time it has been in existence, the bungling manner in which it was broached, and the opposition it has met in certain influential quarters. I calmly leave it to the test of time:—

"Time, that doth all things else impair,
But makes truth flourish, fresh and fair."

Guelph, Ont.

For the American Bee Journal.

An Early Swarm, Wintering, etc.

C. W. DAYTON.

In consequence of a powerful colony of bees in the fall, and surrounded by 18 inches of forest leaves on the summer stand, I am enabled to report the first natural swarm as issuing on May 8—one month and 8 days earlier than in any other year. I think it must be the earliest swarm north of the 43rd parallel. I did not examine my bees this spring as often as usual, and I was not aware that there was such a colony in the yard. Its hive contained 6 combs of brood, and as that was all there was room for in the hive, they had found it too small, and artificial feeding in the open air, followed by a day or two of gathering from fruit-blossoms, led them to seek a new home.

It is usually the case that a colony must fill 10 or 12 combs with brood, or spare brood to help other colonies along, before their hive becomes too small to contain them. This colony wintered on a westerly slope in the most exposed part of the bee-yard, which is in no way protected from the cold winds of winter. I have wintered several colonies in the same position, and with the same preparation for several winters; in fact there has not been a colony lost in wintering on the summer stands, and that method of wintering I have practiced to a considerable extent. It may have been because they were prepared for safety, instead of experiment.

Here I might say to those who favor large hives: *Provided* (that word needs emphasis as it is likely to be lost sight of) the honey harvest lasted just 37 days from the time that colony had its hive filled with brood, would there have been an advantage in the honey gathered, to have spread the brood and inserted empty combs to be filled with brood? On page 60 Mr. Dadant says that I seem to be of the opinion that breeding should be decreased 37 days before the end of the honey harvest. This cannot be exactly my opinion, as I would not destroy brood or practice hive contraction; but that the brood-rearing space should not be increased later than 37 days before the end of the harvest, in my opinion, *provided* the harvest lasted not more than that length of time.

In the article to which Mr. Dadant referred, I did not occupy space to say that honey harvests may vary from 15 to 42 days, and that I work on the outside of the average of 37 days. In a former article it was stated that it sometimes takes until the honey harvest is half over to get the colonies built up to their greatest capacity; this would be 18 days added to 37, equaling 55 days, the length of honey harvest required that the last laid eggs might produce useful bees.

Again, on page 105, Mr. Green has it as discouraging brood-rearing 15 or 20 days before the harvest. It seems that the word "provided" was insufficient to show that the time was given as an illustration; and to the ordinary reader who has not made the contents of the BEE JOURNAL a study, it would be made to appear that I had given candid advice to the effect. To help me out of the dilemma, Mr. Dadant and Mr. Green warn the readers against accepting my illustrations as actual facts applicable to uncertainties. While their warnings may have been given in good faith, I hardly believe that it was much the best for the reader after all. There are amongst the readers of the BEE JOURNAL two kinds of readers—the experienced and the inexperienced; and it is the beginners who follow the teachings of the others. Now it has always been my belief that any reader who would accept an illustration for a fact, ought not to be corrected, but be allowed to follow it that he may stumble and get the right kind of experience while he is yet young in the business; for being guided and prompted along without exertion of his own, he is sure to meet obstacles, and great failures when he is older and has more to lose. Bee-keeping cannot be learned without self-experience, and if it were not for the failures, our knowledge of it would be vastly more limited.

My favorite plan for wintering bees on the summer stands, is to fill a hive holding 5 or 6 combs solidly with capped honey, and then raise it 6 inches from the bottom-board to afford a clustering space, and surround the whole outfit with a foot or more of tightly-packed forest leaves. Thus arranged the bees of the colony on the approach of winter begin a march for the top of the hive, taking the honey as they go.

Another excellent plan is to contract the brood-chamber as much as possible, and then cover the hive with as many leaves as can be afforded, after which cover all with earth, the same as potatoes are buried. There should be a passage from the entrance to the outside air, and what is the most important of all, is to leave a small space directly on the top of the mound uncovered with earth, so that the circulation may pass upward through the leaves and escape. A hive-cover will protect it from the rain. These methods of preparation if well done, I deem almost infallible, and another fall is destined to find me preparing 50 colonies for winter in that way.

Bradford,♂ Iowa.

Local Convention Directory.

1886. *Time and place of Meeting.*

May 20.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

May 25.—N.W.Ills. & S.W.Wis., at Pecatonica, Ill.
J. Stewart, Sec., Rock City, Ills.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Large, Early Honey-Crop.—S. F. Newman, Norwalk,♂ O., on May 12, 1886, says:

This season has been the most favorable for bees in this section that I have ever known. We have had a constant flow of honey for about five weeks from maples and fruit trees, and the weather has been very pleasant. We already have about 1,000 pounds of honey, and our bees are in fine condition to take advantage of the white clover when it blossoms—the lower stories of the hives being packed full of bees and honey. We expect a very prosperous season.

Success in Cellar Wintering.—G. C. Lowry, Casey,⟜ Iowa, on May 9, 1886, says:

Bees are in prime condition in this part of the State. I wintered mine in a good, dry cellar, and I was successful in so doing.

Reversible Frames, etc.—N. L. Minor, Bowling Green,⊸ Mo., says:

I will never use the reversible frames, as their use disturbs the bees too much. I prefer the old Langstroth frames. I favor Mr. Doolittle's idea of studying how to produce the most comb honey in a poor season. I shall try to investigate this subject.

Annoyed by the Bees.—Geo. M. Deer, Riga,⊸ Mich., on May 10, 1886, writes:

My bees are doing well, and nearly all are in good condition in chaff hives. I would like to know whether there is a book that contains the law protecting bee-keepers from being compelled to move their bees to the woods or back fields to satisfy some nervous or jealous people. I have 5 acres in the village and 86 colonies of bees; the talk is that I will have to move my bees away so that people will be safe in their own houses, and along the street; and so that they can cook sweet victuals. The cider-mill man is growling about getting stung sometimes. My bees are about 150 feet back from the road, and some people make an awful fuss when they go by. Can they make me move my bees? This is not an incorporated village, and my bees have done no mischief to amount to anything. They worked on meal that one man fed his horses, and they then were taken out of the shed. The owner said that if I did not move my bees he would; that is the way some talk.

[If the bees are troublesome to your neighbors, you should move them away without waiting to be compelled to do so by law. The bees in our apiary, here at the Bee Journal office, so troubled our neighbors some three years ago, that we promptly moved them away. We think it a duty to society not to annoy our neighbors by needlessly keeping anything on our premises to their detriment.—Ed.]

Too Cold for Honey.—Henry Alley, Wenham,♂ Mass., on May 11, 1886, writes:

The weather is unfavorable for bees. There is plenty of fruit blossoms, but it is too cold for honey.

Preparing to Swarm.—Mrs. J. N. Heater, Columbus,⊙ Neb., on May 10, 1886, says:

My 69 colonies and 7 nuclei came through the winter in splendid condition, with no loss excepting one very weak nucleus which starved with plenty of stores out of their reach. They are all booming on fruit-bloom now, and some are preparing to swarm.

Bees Breeding Rapidly.—Abe Hoke, Union City,⊸ Ind., on May 10, 1886, writes:

I put 32 colonies into winter quarters last fall, and 31 of them came through the winter. I lost one the latter part of April by robbing, and I sold 4. I now have 26, three of which are rather light in bees, but have plenty of stores, and all are breeding very rapidly, except one. On page 762 of the Bee Journal for 1885, I stated how my bees were prepared for winter, and how I had seen bees prepared for winter when I was a boy. I said that I would prepare one in like manner, and see what the result would be. The result was that all the bees are dead, but about one quart and the queen. It is one of my light colonies. Last summer I made an observatory hive of 3 frames 12x20 inches, so constructed that it can be made into a single-comb hive. It has a glass on each side, and a wooden door over the glass. I packed this hive with the rest in dry sawdust, and the bees in it are in first-rate condition. The two outsides of the outside comb are full of brood, one-half of one outside is hatched, and the queen fills the cells as fast as young bees leave them. I saw the queen deposit 5 eggs in one minute yesterday. I have never lost a colony of bees in a straw-hive; the 2 I lost last winter were in wooden-wall hives.

Ants and Roaches.—John L. Isley, Vibbard,⟜ Mo., inquires on May 8, 1886:

Please tell me through the Bee Journal how to keep ants and roaches away from the hives?

[Tansy strewn around the hives is recommended by some bee-keepers to keep them away. A sponge wet with sweetened water might be put in a wire cage to destroy them. Borax, salt or gum camphor, or powdered cloves scattered where they congregate would get rid of them.—Ed.]

Storing in the Sections.—Alex. Rose, Sullivan,⊙ Ills., on May 6, 1886, says:

My bees are storing honey in the sections now. White clover is beginning to bloom nicely, and the prospect is fine for an early honey harvest. Plenty of drones were sealed up some days ago.

Bees Breeding Very Fast.—Wm. Ford, Marshalltown,⊙ Iowa, on May 8, 1886, writes:

My bees wintered well in the cellar. They came out in good condition, strong in numbers, healthy and dry. My loss is 2 colonies out of 13, fall count. They are breeding very fast. They carried the first pollen on April 14. They are now working on apple and cherry bloom. We have every prospect now for a good honey season.

Solving the Wintering Problem.—Wm. F. Kanzler, Fulda,♀ Ind., writes:

It is no wonder that our valuable American Bee Journal increases in favor with the most apiculturists of this country, for the Editor does not attach to each communication his criticism (as some editors do), and he tells the readers when they must stop writing articles on any certain subject. I mark every day the degrees on my elbow-shaped thermometer on the inside of the same bee-hive, and I shall do the same the year around; and if we know the exact temperature and the behavior of the bees in winter, we may solve the "wintering question."

Bees in Good Condition.—W. A. Shafnit, Brighton,○ Iowa, on May 10, 1886, says:

My first swarm issued on May 6. I had only 3 colonies to winter, and they came through in good condition, with the aid of the BEE JOURNAL. Bees in this part of the county do not produce much honey, as they all are in box-hives. I use the new Heddon or Langstroth improved. I would like to know which queen comes out with the first swarm, the old or the young one.

[The old one, of course.—ED.]

The Season in Cuba. — A. W. Osburn, Cuba, W. I., on April 30, 1886, writes:

The winter just passed was a very poor one for honey—too much cold weather; and the spring, so far, has been the poorest of the three since I came here. All new colonies made by division have to be fed, as it is very rare that sufficient honey can be found in the parent hive, that they can spare.

Bee-Keeping in Mississippi, etc.—Lorenzo J. de Sobotker, of Riverton, ♀ Miss., on May 3, 1886, writes:

I came here on Feb. 23 to take charge of an apiary of 132 colonies of brown bees; of these 83 were in one-story 15-frame hives, 10 of which were in very good condition, but 73 were very poor, and 8 of them queenless; in fact many of them went into winter quarters last year upon 5 and 6 frames, and no division-boards. From what I found, there were 100 colonies prepared for winter on the summer stands, but, according to my idea, in very poor condition; and as the winter has been very severe, and the spring very late in coming, I reached here just in time to save a good many bees, which I did by feeding with the surplus combs of honey from the 10 good colonies. The weather has been so changeable from frost to sunshine, and showery weather, since my arrival here, that I could not venture to do anything with the bees until the middle of March, when the red maple and dandelions began to bloom; followed at the end of March by an abundance of willows, and which lasted from 4 to 5 weeks; this has assisted brood-rearing very much—so much that I was obliged to extract on April 22, 23 and 26, from the brood-nests of the strongest colonies, from 84 combs, yielding 15 gallons of splendid willow honey, weighing about 11½ pounds to the gallon. I have been using the combs taken from the hives of the colonies that died last winter, putting them between the brood-frames; in this I have had to be very cautious, as the weather and season has been very backward for honey-production; however we now have the honey-locust, hawthorne, white clover, asters, and the dandelions yet in bloom. The willows are about out; but the bees are increasing spendidly in brood, and I am in hopes of getting them all right for the crop, which I think will be a poor one this year. I am told that this apiary began the winter with 100 colonies in movable frame hives, and 40 in box-hives. I have been transferring 17 colonies in box-hives to movable-frame hives, and have still 32 box-hives with strong colonies in them, which I intend to allow to swarm naturally. So I now have 100 colonies, all with queens, and 32 colonies in box-hives, on some of which I have put one-pound sections. I would call it spring count 100 colonies in movable-frame hives, and 32 box-hives. This apiary was started only last season from 40 colonies in box-hives, and they produced 7 barrels of honey of 45 gallons each, weighing about 12 pounds to the gallon; and these 40 colonies in box-hives were originally gotten from one swarm of bees that came to this place from the woods in the season of 1882.

Early Swarms and Drones.—Dr. H. R. Dorr, Worden, ♀ Ills., on May 11, 1886, writes:

I had a fine swarm of Italian bees yesterday, the first this season. Bees in this neighborhood have come through the winter in finer condition than ever before. I began the winter with 14 colonies on the summer stands, with a new kind of packing, and to my astonishment (but great pleasure) I saw them all safely through, and almost as strong as in the autumn. I had drones flying from several colonies on Sunday, April 18. Who can do better for this latitude?

Promising Season, Small Drones, etc.—W. C. R. Kemp, Orleans, ♀ Ind., on May 13, 1886, writes thus:

The honey season is now upon us in Southern Indiana, and promises to be one of the best we have had for several years. Bees came out of winter quarters in splendid condition—no losses of any consequence. The absence of the product of plant-lice, sometimes called "bug-juice," contributed largely to this condition, but bees gathered considerable honey-dew, and with other kinds of wholesome honey, came through all right; notwithstanding the usual quantity of pollen held its place in the hive. I have a colony now that is a problem that I cannot solve. The queen is an ordinary-looking Italian, apparently young; fully one-half of the brood is drone, and the other half worker. The drone brood are all in worker-cells, and indiscriminately mixed with the worker brood. The hatched drones are but little, if any, larger than the worker bees. There are but few drone-cells in the hive, and, of course, these produced fully-developed drones. I should say one-half of the entire colony are of these diminutive drones. I opened the hive to-day and found two queen-cells sealed up. I began capturing and pinching the heads of drones, and served her majesty's head the same way. I then proceeded to decapitate all the unhatched drones, and the Plymouth Rocks had a square meal for once. I would be pleased if some of the *savants* would give a satisfactory explanation of this condition of the colony described above. The prospect for a bountiful honey crop all over the country I think is better than the average season.

◆

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 17, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2lb. sections, 9@12c.

BEESWAX.—23@24c. per lb. Not much offered.

R. A. BURNETT, 161 South Water st.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4¼c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 20@23c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½.

BEESWAX.—Firm at 22c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—One pound sections, 14@15c.; 2-lb. 13c Extracted, 7@8c.

BEESWAX.—Scarce at 25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The receipts of honey have been more liberal of late, and the supply is now very fair. We quote: Choice comb, in 1-lb. sections, 17@18c.; in 2-lbs., 16@17c. Extracted, white, in kegs or tin, 7½@8c.; dark, in the same, 6@6½c.

BEESWAX.—Demand moderate at 25c.

A. V. BISHOP, 142 W. Water St.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
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923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

To Correspondence.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00..	
and Gleanings in Bee-Culture	2 00..	1 75
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Canadian Bee Journal	2 00..	1 75
Texas Bee Journal	2 00..	1 75
The 7 above-named papers	6 50..	5 50
and Cook's Manual	2 25..	2 00
Bees and Honey (Newman)	2 00..	1 75
Binder for Am. Bee Journal	1 75..	1 60
Dzierzon's Bee-Book (cloth)	3 00..	2 00
Root's A B C of Bee-Culture	2 25..	2 10
Farmer's Account Book	4 00..	3 00
Guide and Hand-Book	1 50..	1 30
Heddon's book, "Success,"	1 50	1 40

◆

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

Advertisements.

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By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO ILL.

10 **COLONIES** yet to spare, at $6. Reference—Rev. Geo. Dunlap, Peotone, Ills.
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BEES for Sale.—I have 40 good, strong Colonies of Italian Bees in good movable-frame hives, I will sell for $4.50 each, delivered at St. Albans Station. Address, A. N. CORLISS, St. Albans, Vt.
20A1t

FOR SALE.—Best Brood Foundation at 40 cts.; Light, 50 cts. Samples free. Also Sections, Smokers, etc.—GUST. PROCHNOW,
19A4t Mayville, Dodge County, Wis.

FOR SALE.—100 Colonies Italian Bees and **200** Tested and Untested Queens.
17A4t **E. BURKE,** VINCENNES, IND.

PURE Italian Bees, of the best strain, in Langstroth or Gallup hives. Send for Circular.
11Atf O. CLUTE, **Iowa City, Iowa.**

200 **COLONIES** of Choice Italian Bees for Sale. For terms, address,
W. J. DAVIS, (box 148),
13A9t YOUNGSVILLE, PA.

300 **Empty Standard Langstroth Hives** for sale at a low price; and a large lot of Empty Combs in Langstroth frames. Also Brood Foundation, and Light if desired.
20A1t **WM. HUNT, Centre Point, Iowa.**

NOW READY TO SHIP—Untested Italian Queens at **$1.00** each. Send for Catalogue. **MARTIN & MACY,**
20E4t N. MANCHESTER, IND.

ITALIAN BEES.

ON account of other work, I must reduce my stock. Will sell *very cheap.* Untested Queens now ready. Satisfaction guaranteed.
20A3t **E. A. GASTMAN, Decatur, Ills.**

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece,
V-Groove, $4 per 1,000
Less for lots of 10,000

40c per lb. for heavy.
50c " " light.
Send for Samples and Price-List.

A. F. STAUFFER & CO.,
15Etf STERLING, ILLS.

Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address.
DR. C. C. MILLER,
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ALLEY'S QUEENS.

READY JUNE 1, 1886.

WARRANTED Queens, by mail		$1 00
" " "	per ½ Doz.	5 00
SELECT " "	each	1 25
" " "	per ½ Doz.	7 00
TESTED " "	each	1 50

By adding 50 cents to any of the above prices we will send the Handy Book, or a Drone and Queen Trap, by mail. **HENRY ALLEY,**
20Atf WENHAM, MASS.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

To Bee-Keepers!

YOU will be interested in perusing a beautiful catalogue which explains fully about the best hives, and gives almost as much information about the best methods of getting honey, as the regular works on that subject. This is no catch-penny scheme, but every statement made may be verified, because the implements used are of the simplest kind, and at the same time the most practical. Send your name, plainly written with your post-office also plainly written upon a postal card, and the names and addresses of any bee-keepers you may know and get this pamphlet free. Address,

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in order to more fully supply the wants of his customers, has entered into partnership with his neighbor, R. L. Taylor, and will offer for sale, bees (full colonies, or by the pound), queens, Given foundation, white poplar sections, hives, cases, feeders, empty combs, etc., etc. Also hens' eggs, for hatching, of three varieties. For circular and price-list, address **W. Z. HUTCHINSON,**
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Plymouth Rock Eggs and Rabbits.

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HOW to MONKEY with BEES

and Price-List of Apiarian Supplies. Sample of Foundation free for your address on a postal card.
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200 COLONIES
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ITALIAN BEES

FOR SALE.—In Langstroth hives, wired foundation frames. Very low. Also 300 of our Improved Sectional Honey-Cases used with or without separators. Circular free.

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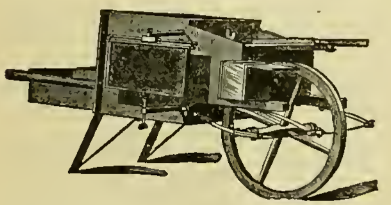

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Tool Box and Recording Desk Combined.

Price, complete, only..... ..... $18.00.

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Foundation and Italian Queens.

Brood Foundation, 1 to 10 lbs., per lb...		45c
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Thin, for sections, 10 cts. per lb. extra.		
Queens—Extra Tested, each...		$3 00
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Address, **A. WORTMAN,**
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STEAM FOUNDATION WORKS
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Comb Foundation, Wax worked by the lb. or for a share. Italian Bees, Queens, etc. *Free Price-List.*

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Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

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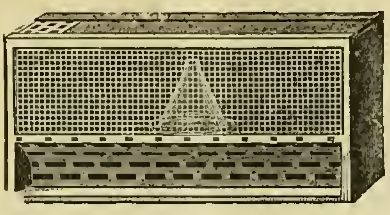
I **WILL** furnish **Warranted Italian Queen-Bees** for $1.00 each; Tested Queens for $2.00 each. Delivered by mail.

PETER BRICKEY, Lawrenceburg, Ky.
18A18t

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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200 Colonies Italian & Hybrid Bees
FOR SALE,

IN 9 and 10 frame hives, all strong and healthy, wintered in the cellar. Will deliver them aboard of cars—for Italians, **$8.50**; Hybrids at **$7.50.** Will guarantee as represented, or money refunded. **Italian Queens**—Untested, $1.00; Tested, $2.50. Send money by P. O. Order or Registered Letter.

16W8t **L. J. DIEHL,** BUTLER, IND.

Bee-Hives, Honey-Boxes, Sections,

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

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MANUFACTORY
FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

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DR. FOOTE'S
HAND-BOOK OF HEALTH,
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is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

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Pure Italian Queens and Bees.

Strong 3-frame Nuclei, in Langstroth frames or frames 10¾x14, with nice Tested Queen, **$3** each.

Extra Selected Tested Queens, producing very gentle and beautiful workers, **$2.00** each.

Warranted Queens **$1.00** each. Don't fail to read my offer to replace all Warranted Queens that prove impure.

My Circular will be sent to all who may apply.

Address, **JAS. F. WOOD,**
20A20t NORTH PRESCOTT, MASS.

COMB FOUNDATION!

Reduced 5 Cents per pound.

UNTIL **Further Notice,** we will sell brood foundation at **40 cents** per lb., and **thin,** for surplus honey, at **50 cents** per pound. This reduction from the prices quoted in our Price Lists for 1886, is made on account of the decline in the price of Beeswax.

CHAS. DADANT & SON, Hamilton, Ill.
THOS. G. NEWMAN & SON, Chicago, Ill.

SOLD!

HAVING Sold the 100 Colonies of Bees offered in the March Numbers of this JOURNAL, I am now booking orders for **Nuclei Colonies and Queens Only.** Also **Bee-Keepers' Supplies.** Send for 1886 Price-List. Address,

WM. W. CARY,
Successor to Wm. W. Cary & Son,
14Wtf COLERAINE, MASS.

A YEAR AMONG THE BEES,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

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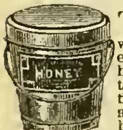
923 & 925 West Madison St., CHICAGO, ILL.

THE AMERICAN APICULTURIST

(ESTABLISHED IN 1883.)

WILL be mailed to any address for 3 months, on receipt of 25 cts. in stamps. **Sample copies free.** Address,
12Atf AM. APICULTURIST, Wenham, Mass.

NEW ONE-POUND HONEY PAIL.



THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
14Wtf **MAZEPPA, MINN.**

IF YOU WANT a good, well-made, durable and practical Machine, send for the

I. X. L. HONEY-EXTRACTOR.

For 2 Langstroth or square frames, only $6.50. Other sizes in proportion. Excelsior Cold-Blast Smoker, postpaid, 75 cts. W. C. R. KEMP,
17A4t ORLEANS, IND.

TWO-POUND

SECTIONS.

Job Lot—Cheap!

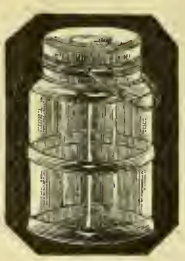
WE have on hand a Job Lot of 25,000 One-Piece Sections with square groove which we will close out at $3.50 per 1,000, or $2.00 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	**$1.60**
" 2 pounds " "	**2.00**
" 3 " " "	**2.50**

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FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

J. M. SHUCK, Des Moines, Iowa.
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Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

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CHAS. F. MUTH & SON,
Freeman & Central Ave., - CINCINNATI, O.
P.S.—Send 10c. for Practical Hints to Bee-Keepers

APIARIAN SUPPLIES

IN order to dispose of our large stock of Hives, White-Poplar and White-Basswood Sections, we will sell for this season at **Greatly Reduced Rates.** Send us your order for lowest cash figures before ordering elsewhere. We will guarantee best of workmanship.

THE H. F. MOELLER MFG. CO.,
Cor. Western Ave. & 5th St., Davenport, Iowa.
6A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE Hives and Sections—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

☞ The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for $1.75.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

O The BUYERS' GUIDE is issued March and Sept., each year. ☞ 280 pages, 8½x11½ inches, with over 3,500 illustrations — a whole Picture Gallery. GIVES Wholesale Prices *direct to consumers* **on all goods for personal or family use. Tells how to order, and gives exact cost of everything you use, eat, drink, wear, or have fun with. These INVALUABLE BOOKS contain information gleaned from the markets of the world. We will mail a copy FREE to any address upon receipt of 10 cts. to defray expense of mailing. Let us hear from you. Respectfully,**

MONTGOMERY WARD & CO.
227 & 229 Wabash Avenue, Chicago, Ill.
12A13t

Italian Bees in Iowa.

60 **CENTS to $1 per lb.; QUEENS, 30 cents to $2.50. NUCLEI** and COLONIES. Order from my new Circular.

OLIVER FOSTER,
10Atf MT. VERNON, Linn Co., IOWA.

Fruit-Farm & Apiary

FOR SALE CHEAP!

96 ACRES, hill-land, ⅓ well-stocked with apples, peaches, pears, plums, quinces, grapes, and small fruit, in fine bearing condition. The remainder is in pasture, grass, grain, etc. Apiary contains **140 ITALIAN COLONIES** in Langstroth hives. Bee-house and all modern appliances for apiculture, in as good location for bees and honey as can be found. Good 10-room house, beautifully located, commanding a view of the city, river and surrounding country. New barn and out-buildings, cistern, never-failing springs, etc. Reasons for selling—age and ill-health.

1Atf **S. A. STILLMAN, LOUISIANA, MO.**

INTRODUCING QUEENS.

HENRY ALLEY has given in the May number of the *American Apiculturist* several New Methods for Introducing both Fertile and Unfertile Queens. Sample copies free. Address,

AMERICAN APICULTURIST,
18Atf WENHAM, MASS.

BEES, bee-hives, imported queens—first-class—cheap. OTIS N. BALDWIN, Clarksville, Mo.
4A1y

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. May 26, 1886. No.21.

Thirty-First of May.—A. L. T., in Vick's Magazine for May, gives these inspiring lines:

> To-day sweet Spring has kissed her buds,
>   And said good-bye to all her flowers,
> And whispered to them of June's birth,
>   Of warmer airs and shining hours.
> And, thus, the faint regret we feel,
>   The fleeting touch of sorrow,
> Is banished with this sweetest thought,—
>   The Summer comes to-morrow.

Mr. A. J. King has returned from Cuba. His address is 336 Webster Avenue, Jersey City, N. J.

S. P. Roddy, of Mechanicstown, Md., has sent us his circular and price-list of bees.

A Canadian prophet predicts that the month of May will terminate in furiously hot weather. It seems to have come already—for at this writing (on Friday) it is "red-hot."

Mr. O. O. Poppleton has returned from Florida to his home at Williamstown, Iowa. He expects to return to Florida next fall. His health is much improved, and so is his wife's.

The Indiana State Fair is to be held at Indianapolis, Ind., from Sept. 27 to Oct. 2, 1886. The premiums on Bees, Honey, and Apiarian Supplies amount to $93.

Mr. C. F. Muth, of Cincinnati, has sustained considerable loss at his farm in Indiana, by the late storm. Many trees were blown down, bee-hives over-turned, etc.

From Dodd, Mead, & Co., 755 Broadway, N. Y., we have received the excellent story entitled, "From Jest to Earnest," by E. P. Roe. It is gotten up in cheap form, and is sold for 25 cents. It is the complete book which usually sells for $1.50.

Bees Annoying Our Neighbors.—On page 314 of last week's issue, we answered Mr. Deer's question relative to the above subject, in a few lines, advising the removal of the bees. In this week's issue, on page 330, Mr. Heddon gives his views of the matter. He is quite correct in saying that "our relations with our neighbors are more or less a continual compromise"—and that compromise can usually be effected by some little kindness or courtesy—or an occasional present of honey. If such a compromise cannot be effected, and if the bees *are a real annoyance*, surely they should be moved without waiting for the process of law.

Mr. C. H. Dibbern, of Milan, Ill., criticises our advice as follows:

> Your comments in reply to Geo. M. Deer, on page 314, in regard to complaints of neighbors being annoyed by bees, reminds me of the recipe to keep hens from scratching, viz: "Cut their heads off." Now most of us are not so situated that we can at any trivial complaint of a neighbor, "fold up our tents like the Arabs, and as silently steal away." I have neighbors living on three sides of my apiary, within 300 feet, and I have no serious complaints. The only fault-finding I have had to contend with, was by bees specking clothes on wash days, early in the spring. This can be guarded against to some extent by not putting out any colonies from the cellar for a day or two before each wash-day, which usually occurs on Monday.
>
> I have noticed that the most complaints about bees being an annoyance, rest on very slight foundations; usually there is some other motive behind these complaints, such as spite, jealousy, etc. It is notorious that some people cannot see others prosper, especially if aided by the bees, which they imagine "work for nothing and board themselves." The best way to allay all such complaints, is to treat all our neighbors in the spirit of the Golden Rule. A section or two of nice honey presented to a fault-finding neighbor occasionally, has a wonderful influence on them. Then, too, should their chickens happen to stray into our yards, we must not shoot them, or raise a great fuss about it; but go to work and fix our fences so that they cannot readily get over, or through them. Also, much depends upon the kind of bees one keeps. I have feared that should the vicious Cyprians be generally introduced, they might make us a "world of trouble." I would advise all bee-keepers so situated that there might be troubled by their bees annoying others, to cultivate such strains of bees as have a gentle disposition—such as the Italians, Albinos, etc. There are some persons probably who would not be satisfied, for reasons already stated, short of compelling one to "move on," and it seems to me that there ought to be some law to protect us against such unreasonable people.

If the complaints of neighbors are inspired by jealousy or ill-will, then the case is quite different. Mr. Deer admits that his neighbors claim that he must move his "bees away so that people will be safe in their own houses, and along the street, and so that they can cook victuals." He also admits that the bees "worked on meal that one man fed his horses," and the result was that they "were then taken out of the shed." "The owner" of the horses, continues Mr. Deer, "said that if I did not move my bees, he would."

If Mr. Heddon and Mr. Dibbern will read the letter on page 314 again critically, we imagine they will agree with us. If they do not, however, it will simply be a case of agreeing to disagree. They do not look through our spectacles. We prefer to agree with our correspondents, but unfortunately we cannot always do so—though we respect their opinions just the same.

"How to Raise Comb Honey" is the title of a new illustrated pamphlet of 16 pages, by Oliver Foster, of Mount Vernon, Iowa. He says that it describes his "improvements in methods resulting from ten years' practical work and extensive experiments," and includes his "adjustable honey-case and clamp." It can be obtained for 5 cents, either of Mr. Foster, or at this office.

We have Received a copy of the "Proceedings of the Davenport Academy of Natural Sciences." This is a book of 350 pages, and covers a period of over three years. It is very interesting and instructive, giving some valuable history of the discoveries in connection with the "mound builders" of the great West—particularly in Iowa. It is beautifully printed and profusely illustrated.

Crossed the River.—Two more bee-keepers have crossed the river of death. Mr. J. M. Clark, of Hillsdale, Mich., on May 21, 1886, writes of them as follows:

> We have this month lost by death two of our Hillsdale bee-keepers. They are W. B. Dresser, who has often been heard from through the columns of the AMERICAN BEE JOURNAL, and Wm. Moshier, who has been quite a successful bee-keeper for an invalid, which he has been all his life. Both of these were very estimable young men, and we shall miss them sadly.

Putting on Sections for Surplus Honey.—Mr. F. L. Dougherty, in the Indiana *Farmer*, gives his method thus:

> It is hard to define just the exact time when the surplus boxes should go on, as much depends on the general condition of things. The experienced eye can easily tell the proper time, in fact the very humming in the air will tell him what the bees are doing. At the proper time the cells unoccupied with brood will be filled with honey, the combs at or near the top will be built out, and the bees will be adding little patches of white comb here and there, showing that they are gathering more than what is required to supply their immediate wants, and they are needing more room.

An Advertiser in Iowa, writes as follows: "I advertised considerable by circulars, near home, but as most of my orders came from New York, Vermont and Ohio, where I sent no circulars, the AMERICAN BEE JOURNAL obtained the orders for me."

As this was only a 5-line notice, and inserted only twice, does it not demonstrate the wisdom of employing our columns when it is desired to reach bee-keepers with any announcement?

> The *Journal of Progress* remarks that "an advertisement in a good trade paper, representing your line of business, is the best kind of a traveling salesman. It has most of the merits and none of the vices of the "traveling man," besides many advantages that are entirely its own. It travels in all directions at once. It visits your customers continually. It talks with thousands of tongues, and has the confidence of its hearers.

The Catalogue of the D. A. Jones Co., (Limited) is received. It contains 16 pages of prices and descriptions of Bee-Keepers' Supplies.

A Circular is on our desk descriptive of a Drone and Queen Trap, gotten up by J. A. Batchelder, Keene, N. H.

QUERIES

AND

Replies by Prominent Apiarists.

Introducing Queens.

Query, No. 254.—I will get a pound of bees about June 1, and will previously have reared a queen for them. I will put them on comb foundation. What is the best and safest way to introduce the queen to them?—Canton.

You had better buy them with the queen. Otherwise introduce her by caging her 48 hours.—DADANT & SON.

I should put the queen with one frame of her brood and bees into the hive that I intended to put the pound of bees in, and then let the bees from abroad run in at the entrance.—G. M. DOOLITTLE.

I think I would risk putting her with the bees without any introduction; but I would rather have the bees on a frame of brood.—C. C. MILLER.

I would introduce her in the same way as I would introduce a queen to an ordinary colony. As the bees will be queenless, and will have no brood, they will be almost certain to accept a queen offered in any manner.—W. Z. HUTCHINSON.

I should cage her for 24 hours, then if the bees seemed in a friendly mien, I should let her out. If the bees did not seem well disposed, I should leave her caged 48 hours. I can always tell when liberating a queen whether I must re-cage her for a longer time.—A. J. COOK.

I would cage her on top of the frames, and as soon as the bees quit "balling" the cage—if they "ball" it at all—I would turn her loose. I would not meet with one loss in a thousand when proceeding in this way. My cages are so arranged that the bees release the queens by eating out the soft candy with which the cage is provisioned. This feature of an introducing-cage is indispensable, in my estimation.—G. W. DEMAREE.

I should either put the bees on two frames of comb, and one of brood too old to rear a queen from, and run the queen into the entrance at dusk; or put the bees on two frames of comb, and put the queen between them on a frame of her own brood. In either case I should not open the hive for 3 or 4 days. A novice perhaps had better put the bees on the comb and brood, cage the queen and keep her among the bees for 2 or 3 days, and then let her out if the bees were quiet, but not so long as they seemed angry and clung to the cage in bunches. There is no absolutely safe method of introduction, so far as I can learn.—J. E. POND, JR.

Sprinkle the bees in the shipping-cage with sweetened water, to which add 15 drops of the essence of peppermint to one pint of water. Treat the queen in the same way. Start the bees into the hive and let the queen run in with them, is one of the many ways you can do.—H. D. CUTTING.

Transferring and Italianizing Bees.

Query, No. 255.—I have 50 colonies of pure Italians on Langstroth frames, and I am buying and moving 40 colonies of blacks in box-hives to within a mile of my home apiary. How can I best transfer and Italianize them to secure the most surplus honey?—Texas.

Rear Italian queens, and at the time of transferring give an Italian queen after removing the black one. Any of the bee-books will tell how to transfer.—G. M. DOOLITTLE.

Transfer all the best worker combs with the worker brood, and fill out with frames filled with foundation. Rear Italian queens in the home apiary, and at the close of the early honey season, supersede all the black queens, introducing Italian queens in their places.—G. W. DEMAREE.

According to the old or Heddon method, as described in my Manual. This should be done at the swarming season, or a little earlier.—A. J. COOK.

Practice "modern transferring" as advised and practiced by Mr. Heddon. Rear queens during the honey harvest, keep them in nuclei until the honey harvest is over, then introduce them to the full colonies of blacks.—W. Z. HUTCHINSON.

Any of the standard directions for transferring and Italianizing are good, but to tell you how to do so to obtain the most surplus honey, is a difficult matter, as location makes such a great difference.—H. D. CUTTING.

Unless the combs are very nice and straight, you will do as well to use foundation. Mr. Heddon's plan of transferring, as given in the BEE JOURNAL, is good. Rear Italian queens in nuclei of full-sized frames, and add the nuclei, queen and all, to the black colony during the honey-flow, having killed the black queen.—C. C. MILLER.

Transfer them by my plan called "modern transferring," which has been detailed in the BEE JOURNAL and Prof. Cook's book, and also in mine. For the sake of more honey and Italianizing, move those black bees out of your home field, and rear queens for them in your home apiary. Move them six miles away.—JAMES HEDDON.

Transfer the bees from the box-hives at once, and Italianize them as instructed in the text-books, of which "Bees and Honey" is of the best. It would require a page or more to answer this question, and as good an answer as I can give will be found in the above work. Some advise waiting till a swarm issues from the box-hive before transferring. I do not myself believe transferring as ordinarily advised pays. I much prefer the method described some 2 or 3 years ago by Mr. Heddon.—J. E. POND, JR.

Using Empty Combs.

Query, No. 256.—Having lost all of my bees (19 colonies) during the winter and spring, I have ordered two 3-frame nuclei with Italian queens. I propose to send for bees by the pound; how shall I proceed in order to utilize my empty combs to the best advantage?—J. C.

Put the combs in close boxes so that they will be safe from moths, and use them as rapidly as needed by the bees.—A. J. COOK.

Give the bees as many combs as they can cover; also furnish them with queens, and as fast as the bees increase in numbers, add more combs. Produce extracted honey.—W. Z. HUTCHINSON.

Watch so that mice and worms do not infest the combs; keep them well spread apart in a cool, airy place; and give them to the bees just as fast as they can use them.—C. C. MILLER.

I would buy bees in box-hives "cheap," and "drum" out two or three swarms from each box-hive, using the empty combs to hive them on, and rear queens from the nuclei for each swarm. My next choice would be to buy bees by the pound, and fight the the moth-worms with the fumes of brimstone.—G. W. DEMAREE.

You can rear queens from one nucleus, and if you get enough bees by the pound, you can soon have the most of your combs in use. Keep your queens hard at work, and add an empty comb as often as practicable.—H. D. CUTTING.

I should get an untested queen with each pound of bees, and upon arrival I should take a frame of brood from the nuclei and put with a hive of combs, hiving the bees and queen upon them. Later on, these colonies can furnish brood in place of the nuclei to hive other pounds of bees on.—G. M. DOOLITTLE.

Put one queen with 2 pounds of bees in a hiveful of comb during the white clover bloom. This will make a good colony promptly.—DADANT & SON.

Hive the bees on the empty combs and give queens to them. Fill up by adding more combs as fast as the queen can occupy them. Work carefully and intelligently in this way, and if the season is fair, each pound of bees will build up into a good colony; and, if first-rate, it will probably produce a little surplus. Read and study the book "Bees and Honey" carefully, also the AMERICAN BEE JOURNAL, for valuable information and instruction.—J. E. POND, JR.

Shipping Bees by the Pound.

Query, No. 257.—1. How do you proceed to put up bees by the pound in a wire cloth, section-box cage? 2. What prevents the bees from running up from the cage and out of the funnel, while you are getting more to shake in? 3. How do you manage to get the weight? or do you estimate the weight by the bulk?—C. W. C.

I have had no experience with sending bees by the pound, except in the shape of a nucleus, which I consider the best plan of sending bees.—G. M. DOOLITTLE.

1. I would not use the section-box device to ship bees in. For a pound of bees I use a plain, cheap box 6 inches wide, 4¼ inches deep, and 14 inches long. The bottom is nailed to the side-pieces, and a board 5 inches wide and as long as the bottom is wide, is nailed across the top of the box. On the under side of this center board is a pocket made of thin cotton-cloth which is filled with wet sawdust. The ends and the openings at the top on each side of the *padded* center-board, are covered with wire-cloth. The soft candy—½ pound to each box—is secured in a little box made of "section stuff," which is slatted at its top, and is nailed to the bottom of the shipping box. 2. The wire-cloth at one end is left unnailed until the bees are all in the box. The funnel is smooth and nearly perpendicular, and the bees slide down and cluster in the box. 3. The box is set on scales, the funnel placed in position, the weight taken, and the "pea" set forward I pound. The bees are brushed into the funnel till the beam tilts. I use a turkey quill to brush down the bees that stick to the inside of the funnel. The wire-cloth is then nailed down, and the package is ready to be directed and shipped. When I send a queen with the bees, she is caged with her suite, and the cage is fastened to the side of the inside of the shipping box. With my sawdust pad and the queen caged with the bees, I am sure that I can ship a pound of good, healthy, young bees to nearly any place on the globe. The pad of wet sawdust keeps the bees quiet when nothing else will. Shipping bees by the pound is any thing but pleasant—try it.—G. W. DEMAREE.

Convention Notices.

☞ The 5th regular meeting of the Hill County Bee-Keepers' Association will be held on the first Tuesday in July, 1886, at the apiary of Hon. J. M. McDaniel, of Peoria, Tex. At the same time and place will be held a bee-keepers' honey picnic.
H. A. GOODRICH, *Sec.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold their next meeting at Mr. Ed Whittlesey's, 2½ miles south of Pecatonica, Ills., on May 25, 1886.
J. STEWART, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec 1 and 2, 1886.
H. D. CUTTING, *Sec.*

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ᴗO northwest: O~ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Western Bee-Keepers' Convention.

The semi-annual convention of the Western Bee-Keepers' Association was held in Kansas City, Mo., on April 29 and 30, 1886. President Hayhurst called the meeting to order at 10 a.m., and the reports of the Secretary and Treasurer were read and adopted. A communication was read from the Corresponding Secretary of the North American Bee-Keepers' Society, requesting that a committee be appointed to make a display of the honey-producing plants at its meeting in October next. This was deferred until the next day. While the committee on questions for discussion were preparing them, the President asked, "How did you winter your bees?"

L. W. Baldwin—My bees are wintered mostly in the cellar. I left 25 colonies out-of-doors. I weighed 17 colonies placed in the cellar, and found they had consumed 4 pounds of honey in 100 days. I also weighed those out-of-doors. I had 15 colonies packed with 2½ inches of leaves all around and on top. Those consumed, on an average, 6 pounds, and 10 colonies packed on two sides and on top, averaged 8 pounds per colony. This shows that shutting colonies only on as many combs as they will occupy, and well packed, saves stores. I gave upward ventilation to those in the cellar. My apiary wintered well.

R. F. Muir—I cannot winter my bees in the cellar on less than 5 pounds of stores. I have never weighed any of those out-of-doors.

Jas. H. Jones—I wintered 95 colonies out-of-doors, packed, and 50 in the cellar. Those on the summer stands wintered the best. My cellar was not right; it did not have sufficient ventilation, and the combs molded.

A. A. Baldwin—I think that the best point in packing bees out-of-doors is to keep them from being caught from the cluster. I have lost three times as many bees, on an average, in colonies not packed than those packed on all sides and on top.

R. B. Leahy—I have had some experience in wintering weak colonies. I did not double up my nuclei last fall, and lost one-third. I have used no packing in wintering bees out-of-doors, and I have lost only those spoken of.

The Constitution was amended by adding Art. 10, viz: "The annual dues for each male member shall be 50 cents."

The committee to prepare questions reported, and the convention adjourned till 1:30 p.m.

The opening session was well represented by bee-keepers from Missouri, Kansas, Nebraska and Iowa, and the attendance was larger than at any previous meeting. Several ladies were present.

AFTERNOON SESSION.

The President called the meeting to order at the appointed time, and Mr. A. A. Baldwin was called on for his essay on "The best method of handling bees for comb honey." Several points in the essay were discussed.

Jas. H. Jones—There would be more money made to take out a part of the bees from the swarm and return the remainder to the parent colony, and would in that way get the swarming fever out of them. I have practiced returning the entire swarm, and I find a great deal of trouble in my bees sulking.

"Is it best to unite weak colonies in the spring?"

A. A. Baldwin—I think that the best way is to unite them at the commencement of the swarming season. Up to this time we have two queens for breeding.

Jas. A. Nelson—I would unite queenless colonies with those having a queen.

Jas. H. Jones—If we do not want increase we can take the smallest and unite them with the next strongest, and continue until the colonies are strong. I think that the plan of nursing weak colonies up to the honey season and then uniting them is a good one.

An able article was read from Clemons,Cloon & Co., on "The honey market," which contained among other interesting statements, "that comb honey should be placed on the market in packages of from 24 to 40 pounds each, and that the sections should be unglassed and weigh one pound each." They would not advise the use of ½-pound sections.

The usual subject on the best race of bees was thoroughly discussed.

J. D. Ghering—My bees are mostly blacks, and I produce as pretty honey as the market affords. I do not find the Italians disposed to finish up their honey as perfectly as the blacks. I have tried placing the honey from the Italians on the hive of the blacks to finish up, with a good deal of satisfaction.

"Is it necessary to have a honey-board with open-top frames in getting comb honey?"

R. B. Leahy—I have never used a dozen honey-boards in working for comb honey, and I do not have any trouble with the queen getting into the sections.

John Conser—I have not had any trouble with queens in the sections.

I have a space of ¼-inch above the frames.

A. A. Baldwin—Most of the bee-keepers using the open-top frame have now gone back to the honey-board. Honey in sections is colored more with open top-bars, especially on old colonies. I think that we must have a honey-board if we want to get honey for the market.

"Can more honey be produced from a non-swarming colony than a colony and its increase?"

Jas. H. Jones—I had a colony that did not swarm for two years, and it is my opinion that if I can have my bees non-swarming, I can get more honey. It is the swarming fever that injures our honey crop. I think it destroys at least one-third of the product.

John Conser—I do not see any very material difference in colonies on either side.

A. A. Baldwin—I think we cannot decide without several years' experience, and it is the safest way to get a light increase.

J. S. Atkins—One-third of my bees do not swarm, and I always get the heaviest amount of surplus from those that do not swarm.

"Which is the best way to get increase, by natural swarming, or by dividing colonies?"

John Conser—If you want bees, divide colonies; if honey, let nature have its course.

A. A. Baldwin—We must feed liberally with honey or sugar in order to be safe in making colonies by division.

Adjourned to 9:30 a.m.

SECOND DAY.

The meeting was called to order by Vice-President R. B. Leahy. The Association invited members of sister organizations and representatives of the press to take part with it as honorary members.

An essay from Mr. Jos. Nysewander, was read by the Secretary, and the convention unanimously adopted it as its sentiments. It is as follows, on

DOES BEE-KEEPING PAY?

It behooves every one who contemplates engaging in a pursuit, or who is following a certain line of business, to consider well its possibilities both as to failure and success. If we can determine upon a reliable basis that the possibilities are plausible, and that success depends upon our own energies, tact and experience, we have at least solved one phase of the business that will be an incentive in prompting us to continue persistently in it until we have mastered it and success has been attained.

At this time, when very few things really do pay a profit, the agriculturist and others have made tests of various kinds of adjunct pursuits, as well as vocations by which a livelihood may be honestly earned, and yet independently. I believe where there is the faintest hope for remuneration nothing has been exempted from these tests. The agriculturist feels the necessity of diversified farming, and to make all the additions to his chosen pursuit that will contribute to his income; for, since the production of the leading crops do not at present pay largely and are necessarily marketed at minimum figures, everything within the scope of his control is brought into requisition for his financial enhancement. Remuneration is the all-absorbing topic of the day. It is in such times that a business that is new in its nature will receive the most thorough and practical tests, and will grow in favor or be promptly discarded in proportion to its real and deserving claims.

As to the profits of apiculture: It is a significant proof in its favor that the interest taken in the business is largely increasing and spreading year by year. As an indication of this increased interest the number of bee-papers that have lately been presented to the public, and that are being sustained, as well as the department in agricultural papers devoted to the subject goes to prove; for they have not so much created a demand, as to meet one.

As to remuneration: We too often overlook the fact that we must learn a business before it will yield us a profit. If we expect to go into any kind of business and reap a profit at once without first thoroughly mastering the details of it, we will more than likely fail; and too frequently we attribute the failure to the business instead of ourselves, where the fault rightly belongs. In the minds of those who have skillfully followed the business, I believe there is no question as to the profits of apiculture, and that as a pursuit, although irregularities and a lack of proper management may have created gross misapprehensions by some as to it as a business. As a cause of the former the bee only improves "each shining hour," and sometimes it is the case that when it could work most effectually—that is, when the hive is full of bees and the flowers are laden with nectar, the inclemency of the weather excluding the light of the sun for a protracted period will as certainly exclude the rays of hope as to a profitable season; and then, the flowers do not secrete nectar equally abundant every year. But the specialist calculates on irregularities, and is content to average the poor seasons with the abundant yields, and so far the average has proven itself such as to make the business altogether a success.

Even if rightly managed we should not decide bee-keeping a success or failure by a single year's trial; for what is the crop that can be produced with absolute certainty? Failures will come. They will come to the farmer, and they will come to the bee-keeper, but it would be utter foolishness to discontinue a business because of an occasional failure. There is one characteristic that a bee-keeper must have, and that is *diligence*, and that through failure as well as success; to feed when the bees ought to be storing away honey, and to spend when he ought to be receiving, for in due time in the "golden future" the "shining hour" will come, when these little creatures that have been cared for so long and so diligently will more than repay all efforts thus bestowed upon them, and an over abundant season will fully make up the loss of a poor yield.

While it is conceded that nature and the bees do their part, the question arises, is there not danger that the honey market will be overstocked so as to make the business unprofitable? Let us not be selfish enough to anticipate such a condition of things. Shall we let the tons of nectar "waste its sweetness on the desert air" because of the plea that there is no one who wants it? I believe that the list of 300,000 persons who now keep bees could be more than doubled, and there would still be a demand for the product; for instead of its being looked upon as a rarity and a luxury, it would be considered a staple article.

Nature is rich in her treasures, and the earth yields profusely her fruits for the benefit of mankind, and if by skillful means we are enabled to utilize her wealth and gather in her treasures to add to the commonwealth, we not only do that which redounds to our greatest profit, but it is more honorable than to contend over that which is already produced. Let us be assured that there is yet a competency for faithful efforts in apiculture as in other rural pursuits, and that Nature will yield from her bountiful storehouse in proportion to our skill and diligence.

R. F. Muir—I think that putting the best side of the pursuit out induces many to go into the business, and creates thereby many failures. I do not believe that there is more than 1 per cent. that succeed in the business. The ones that generally make it pay are the supply dealers.

R. B. Leahy—Every pursuit that is honest should be upheld, and so long as it is conducted properly it should not be put down.

C. M. Crandall—I do not think that it is good policy to flatter others in regard to the profits of the business, but I am heart and soul with Mr. Nysewander's essay.

P. Baldwin—I believe that 98 per cent. of the scientific bee-keepers succeed in the business. I do not think that the pursuit can be justly estimated from the whole number of bee-keepers.

"The use of foundation, its benefits, etc.," were discussed as follows:

John Conser—I think that the nearer we can get to natural comb the better. I use thin foundation with high side-walls in sections; in brood-frames as heavy side-walls with thin base as possible. I use wax put on with a pencil-brush in fastening foundation, and I use wired brood-frames enough to keep the top-bar from sagging.

L. W. Baldwin—In using foundation I have had some losses from its sagging. This year I am going to use strips of foundation 4 or 5 inches wide, made from refined wax. I want it made about 5 square feet to the pound. I fasten it in the brood-frames with a composition of ⅔ wax and ⅓ resin. I use foundation in the sections in pieces 2x3 inches. I do not think that anything is saved by using full sheets either in sections or brood-frames.

Pres. Hayhurst—I have used 400 or 500 pounds of foundation. I have never used it in sections, as I do not produce honey in sections. The principal use I make of it is in brood-frames, I have never made any very extensive experiments in getting natural combs built. I shall continue to use it fastened with wire.

"Will the bees gnaw away the foundation about the wire ?"

Pres. Hayhurst—I think they will sometimes. I get my foundation drawn out in upper stories.

A. A. Baldwin—I think the time to use foundation in brood-frames is during fruit-bloom, and I lately examined some colonies and found that in two days they had drawn out the foundation and were putting in brood. I do not think that it sags at this time with 5 square feet to the pound. In sections I would use a very thin base and not too heavy side-walls, because the bees in drawing it out leave too much yellow comb.

"Do the bees cut away the foundation at the bottom of the brood-frames ?"

A. A. Baldwin—In some instances.

R. B. Leahy—I use six cross wires to the frame, and two diagonal wires. I never have any trouble with sagging. I make it by putting a thin sheet on each side of the wire, and pressing them together. I have the tops of my sections grooved and run a little wax along the edge of the foundation.

Jas. H. Jones—I put foundation in sections by using beeswax and resin.

P. B. Thaxton—I use wide frames, six sections to the frame, and put in each section a block about half the depth and thickness of the section, beveled on two edges, and lay the foundation on them and run wax along the edge. I then give the frame a light shake downward to remove the blocks.

C. M. Crandall—I do not think that it is necessary for the average bee-keeper to use wired frames. In using foundation in sections I have tried in a small way for three years to use it without separators, and I have had no sections perfect. I cannot place them in the crate.

Pres. Hayhurst—I think that the wires are absolutely necessary, and I shall stick to them.

"Is there any gain in using full sheets of foundation ?" Some of the members thought not.

J. D. Gehring—White clover yields slowly in my section of the country, and that is the reason I use full sheets in sections.

"How do you prevent after-swarms ?"

A. A. Baldwin—Cut out the queen-cells on the seventh day, and after one or two days introduce a virgin queen or a queen-cell.

"Is it advisable to clip the queen's wing ?"

L. W. Baldwin—I think that it is one of the grandest things connected with swarming. I have had as high as 15 swarms at one time, and secured the queens and hived them on the old stand.

John Conser—As a general thing swarms settle with a queen; I then hive them in a hiving-box and put them into the hive. If it is necessary to repeat the operation, I do it, and have had no trouble.

P. B. Thaxton—I think that clipping the queen's wing is one of the grandest things in handling bees. I hive the swarms on the old stand.

The Secretary was instructed to correspond with the Secretary of the North American Bee-Keepers' Society, requesting them to appoint the meeting for 1887 at St. Louis, or some other city in the West.

The closing hour of the convention was spent in a general experience meeting in which all took part, and was enthusiastic and profitable. The display of apiarian fixtures was not as large as was anticipated. Among those exhibited were: J. M. Shuck's reversible hive; L. W. Baldwin's side-storing and chaff-packing hive; smokers, queen-cages, feeders, etc., from R. B. Leahy; and a fine display of extracted honey by John Conser.

The convention adjourned to meet in Kansas City, at the call of the executive committee.

P. BALDWIN, *Sec.*

For the American Bee Journal.

Dr. Miller's New Bee-Book.

WM. F. CLARKE.

One of our great poets (I forget which) says, "In every work, regard the author's end." He sets out to do a certain thing. Judge him by the performance of that, and not of something else which he did not undertake to do. Dr. Miller does not propose, in his little book, to lay down a methodical system of bee-keeping, or to produce a complete treatise on the subject, but to write about some of the things that interest bee-keepers in the style of "a familiar chat." He promises to describe his own methods, not assuming that they are the best, or making invidious comparisons with the methods of others, but giving full permission to his readers as they glance from page to page, to exclaim, "Oh, how foolish ! I know of a good deal better way than that !" But he modestly hopes that "*some* may find a hint here and there that may prove useful"—he might have safely said *all*.

This book is in reality a substitute for a visit to the Doctor's apiary. There are thousands of bee-keepers in the United States and Canada who, if they could pay such a visit at a cost of only 75 cents, would pack their satchels for a start in double-quick time. Well, the next best thing is to buy and read "A Year Among the Bees." By so doing you will see where and how the Doctor lives, what his apiary looks like, and be introduced to the whole family, including the father and mother-in-law, three miles off. You will get a glimpse of Mrs. M. chasing her husband with a bee-smoker and a switch of goldenrod, Charlie taking out full sections at the rate of nearly 1,000 an hour, and Aunt Emma who, though sometimes "decidedly 'stuck-up,'" is literally "as sweet as sugar."

The Doctor does not meddle with any of the vexed questions that agitate the equinimity of bee-keepers. The pollen theory, reversing hives, hibernation, the Heddon patent, etc., he relegates to a temporary oblivion, and the entire army of belligerent bee-keepers find "Othello's occupation gone," as they linger amid these peaceful pages. One is reminded of the old hymn :—

> "There shall I bathe my weary soul,
> In seas of heavenly rest,
> And not a wave of trouble roll
> Across my peaceful breast !"

Well, it is pleasant after the din and smoke of battle, or the wrack and fury of the storm, to get into a quiet nook where sunbeams linger, and soft zephyrs whisper the sweet music of peace !

A large number of practical subjects are discussed, such as:—taking bees out of the cellar; hauling and overhauling bees; hives, covers, and stands; feeding meal and syrup; the honey harvest; frames and supers; sections; shop for bee-work; management of sections and starters; separators; getting bees to work in sections; precautions against robbers; fumigating honey; protection from stings; swarming and its prevention; queen-rearing; fall feeding; marketing honey; putting bees into the cellar; cellar ventilation; bee-pasturage, etc. The views of a bee-keeper of such long experience on these and other topics cannot but be suggestive and provocative of thought. He must be indeed a stolid bee-keeper who is not interested and profited by "familiar chat" on such themes.

The Doctor is not one of those who pooh-pooh a bee-sting, or have attained the state of indifference to its infliction, and is evidently of the opinion that there is a little of the spirit of bravado in certain quarters regarding this matter. A great many iron-clad bee-men will be disposed to make fun of his confession. "A bee inside my clothing makes me very nervous," etc., but I know of one whom nature has not endowed with a pachydermaton's hide, who read that chapter with the truest sympathy, and instead of exclaiming, "Oh how foolish !" involuntarily said, "That's so !" at the close of every sentence !

Various methods and devices are given in detail with measurements and particulars enabling those at all mechanical to avail themselves of the wisdom that has come from a quarter of a century's familiarity with bees and this fact should commend the book to beginners, and those who have not been long conversant with bee lore. Such cannot but find it very useful, while it will be read with interest by the oldest veterans in the business, whether in Europe, Asia, Africa or America.

The most interesting passage in the book, to my mind, is found on pages 27 and 28, where Dr. Miller shows that his experience and observation have brought him to the point reached at the Detroit Convention in

December last. Let a colony come out of winter quarters strong and with combs full of stores, and it wants no tinkering. Like a darkey said, its "boun' for de kingdom," and nothing short of some dire catastrophe, such as the loss of its queen, can stop it. Colonies cannot become strong and populous too early in the season, and they will build up more quickly by having plenty of stores in the hive, than they will by having food doled out to them day by day. Bees have more sense than some human beings. They will not increase and multiply unless they see a rational prospect of their children having bread to eat. While they have more wisdom than the improvident and reckless poor, they are more true to nature than the self-pleasing rich, who do not want to be bothered with children. Give bees plenty with which to support a numerous progeny, and they like nothing better than to have a house full to overflowing with children; and this condition of an apiary in early spring is far more important to its prosperity and profitableness than any particular set or kind of "fixins."

The Doctor sets an example which it would be well for bee-keepers generally to follow when they write for the papers. He refuses to say "we" when he means "I," and if the printer runs out of big "I's" toward the close of the book, tells him to use little ones. That's good.

"Pigmies are pigmies still though perched on Alps,
And pyramids are pyramids in vales."

Guelph, Ont.

For the American Bee Journal.

Marketing Honey.

W. MASON.

On account of some observations taken of honey in the markets last fall, and the honey season being near at hand, I desire to make a few suggestions in regard to the unmarketable condition of honey placed on the markets—both of comb and extracted honey—by some of our honey-producers. I do not wonder at our honey consumers manifesting some disgust and prejudice toward our honey, as to purity and quality, from the unmerchantable condition in which it is placed on the market.

I hold that every honey-producer makes his own market for his honey trade. Every honey-producer should be careful to always put his honey in the best possible shape to attract the attention of the consumers, and its appearance should bespeak the quality it represents. If it is honey in sections, the sections should be bright and clean, and never used the second time, as they become stained and besmeared with propolis, and broken or split, as I have seen on the markets. This manner of marketing honey will ruin any producer's trade, and I was about to say that it ought to.

Extracted honey should be well ripened, with no pieces of comb in it; then put up into clean jars with the honey on the outside of jars well cleaned off. This gives honey a good appearance, and inquiry is soon made, if not labeled, as to who the producer is. We cannot be too careful in preparing our honey, either for home trade or for shipping, and we should never suffer rough, unsightly honey to leave our premises; even at a reduced price. Some of it we can use in our families, and the balance feed back to the bees.

We must make our honey do its own advertising both in purity and appearance, and put such guaranty on it that when our consumers try it they will buy again; thus enabling us to obtain a fair price for our honey, The only trouble I have in this line is in not being able to supply my customers, as I am always short of honey at the end of the season. While I am not a large producer, my effort this season will be to accommodate my trade. I have orders now waiting for at least 500 pounds, as soon as it is produced; and I hope to get a good supply, as I have 30 colonies in good condition for honey-gathering.

Fillmore,+o Ind.

For the American Bee Journal

Prevention of Swarming.

ERWIN STANHOPE.

My plan to keep bees from increasing, and to turn their swarming habits to honey-producing, is as follows: I use the 8-frame Langstroth hive, and a box on top just 20 inches long in the clear. The box holds 13 frames just 5x10 inches in the clear, which hang crosswise in the box. The frames are made of heavy ¼x1½ inch stuff, and each frame holds 2 sections 5 inches outside by 1¼ inches wide. Each box has an entrance at the bottom of one end. Now suppose we are looking for swarms, the queens being clipped. We have some boxes ready, sections with starters all in if a large swarm, and two boxes, one on top, with 52 sections. When the swarm comes out cage the queen and hang her in among the sections. Move the old hive away and cover it with a sheet. Put the sections, queen and all on the old stand. The bees will go into the boxes. (Sometimes a swarm will fly out once or twice, but hold the queen and they will soon quiet down.) The next day toward night, move the old hive back near the boxes. The bees will work hard in the sections, and they will put in lots of bee-bread. But do not be afraid, for it will be all right in the fall. After 7 or 8 days cut out all the queen-cells but one; or, what is better, let a young queen out on the comb. Put the sections, old queen and all on top of the old hive; put the old hive on the old stand, and you will see big work. In 15 to 18 days let out the old queen, and the young queen will make way with her; or if anything has happened to the young queen, you will still have the old one. Second swarms need only one box of 26 sections. Do not cage an unfertile queen. It is quite necessary to use sections 1¼ inches wide, for if they are more than that they will try to make two combs in one section, as they want to make brood-comb after swarming. I have been running my bees on this plan for a number of years, and it is very satisfactory.

Mears,+o Mich.

For the American Bee Journal.

High Temperature in Bee-Cellars.

W. H. STEWART.

In Mr. Barber's essay on "Wintering Bees in Cellars," on page 809 of the BEE JOURNAL for 1885, he says: "It is quite often said that no one has learned the secret of wintering bees, so that they can be *wintered safely every time*, but I *deny* the assertion." (Italics are mine.) Mr. B. bases his denial on the fact that he has wintered hundreds of colonies for the last 25 years, and bringing "80 per cent. out as good as when they were placed in winter quarters, and losing none." He tells us that he winters his bees in a "warm, damp cellar," and if we do not misunderstand him, he keeps the temperature in his cellar up to from "60° to 90°."

He also says that "the cellar must be closed, with no currents of air, either hot or cold, passing through it." Will Mr. B. please tell us how he keeps his cellar thus warm in his cold climate, and at the same time "damp" without injecting a current of hot, or warm, damp air? Again, will he please tell us how he can keep a "constant draft" through his "ventilator from the top of the room" without a volume of either warm or cold air equal to that which passes up through the ventilator, passing into the cellar, and thus keeping up a constant current through it?

He says that his "plan of wintering bees is no theory, but is one that is practiced by scores of bee-keepers in Northern New York, and invariably without loss in winter." How can it be possible that in the same State, and only a few miles distant from Mr. Doolittle's locality, "scores of bee-keepers" should be wintering hundreds of colonies without loss, and the wide awake Mr. Doolittle never become acquainted with the fact? Why should Mr. D. have such winter troubles, and suffer such losses? There seems to be a mystery connected with this matter.

Further, Mr. B. tells us that what he claims for his plan of wintering is, that it is the safest plan; and in the next to the last paragraph he tells us that "where but few bees are kept where he lives, they have no trouble in wintering them in any cellar where vegetables will keep without freezing." How can Mr. Barber's 60°-to-90° cellar be safest, as he claims, when his neighbors winter bees without loss, in cellars of any kind where the temperature stands as low as 33° or 35° above zero. Will not 25 colonies winter as well in a temperature of 35°, as will 200? How far from Mr. Barber's immediate neighborhood does this area of country extend, where bees can be wintered in small quantities without loss "in any cellar where vegetables will keep without freezing?" Why does it not extend as far as Central New York where Mr. Doolittle lives?

Did Mr. Barber live where he now does during his "early experience," when he "had all the trouble in wintering that many are experiencing now?" and when he "tried every place and manner of wintering" at that time that looked reasonable? Did he try them in small quantities in "any cellar where vegetables will keep without freezing?" If so, why all the troubles in wintering; then and none now, in the same kind of a cellar?

Mr. B. claims, secondly, that wintering in cellars where the temperature is 60° to 90°—"is cheapest;" and yet he tells us that "they will use more feed in a warm than in a cool one." Is more feed cheaper than less? I believe that a warm cellar is better than a cold one for wintering bees; but Mr. B. states as much in favor of cold ones as warm ones.

I am not doubting in the least that Mr. B. is of late successful in wintering bees in his warm room, and his neighbors at the same time as successful in using all sorts of cellars that do not freeze; but I do question whether it is all in the temperature—warm for the many, and cold or warm for the few colonies. My opinion is that at the present time there is growing in Mr. Barber's vicinity some plant or plants that were not there 25 years ago, and that from such source, his bees now get sufficient fall honey to keep up breeding until winter sets in; and thus both he and his neighbors have plenty of young bees for winter and spring.

I wish to thank Mr. B. for the plan that he gives us for laying a floor on which to stand the hives; and also for the idea of placing them in a compact form, so that if a live bee leaves one hive it has not far to go to find and enter another. But how to invariably winter bees in a cold climate without loss, is still an open question.

Orion, ♀ Wis.

* * *

For the American Bee Journal.

Sheboygan County, Wis., Convention.

At an adjourned meeting held on May 8. 1886, at Sheboygan Falls, Wis., an organization was effected, and the name of the old society, the "Sheboygan County Bee-Keepers' Association," which has been inactive for several years past, was adopted, also the constitution and by-laws with slight amendments. The officers elected are as follows: President, H. F. Shadboldt, Winooski; Vice-President, W. H. Hawkins, Sheboygan Falls; Secretary, Miss Mattie B. Thomas, Sheboygan Falls; Treasurer, Mrs. H. Hills, Sheboygan Falls.

Matters of interest to bee-culturists were discussed, and the meeting adjourned to Saturday, Sept. 4. at 10 a.m.

For the American Bee Journal.

Feeding Sugar to Bees.

W. Z. HUTCHINSON.

I wish to thank Mr. H. E. Hill for his kind words and the kindly manner in which he criticises on page 281. It is pleasant to know that I belong to that class of contributors whose writings "are eagerly sought after," but I hope no one *blindly* follows where I lead. All are expected to use their *own* reason.

I should consider it the height of folly for Mr. J. B. Hall, or any one else who successfully winters his bees upon natural stores, year after year, to feed his bees sugar for fear that they *might* not winter well if he did not; but if he wintered them on sugar because honey was dear and sugar cheap, I should consider it wisdom. The advice to feed sugar for winter stores is not intended for those who are uniformly successful with natural stores; but if those who do lose their bees quite frequently from diarrhea, learn that they can prevent such losses by feeding sugar for winter stores, will they be expected to desist simply because those who are successful without sugar fear that the practice *may* assist in giving color to the *unjust* accusation that some bee-keepers secure their honey by feeding the bees sugar? Do those who are opposed to the practice really expect such a sacrifice on the part of their less fortunate brothers? If they do, it shows most conclusively that while they may understand bee-culture, they are lacking in their knowledge of human nature.

Perhaps the majority of successful bee-keepers—those who succeed in wintering their bees and in selling their honey (of which J. B. Hall is a shining example)—do not use sugar, and probably never will; but is it to this that their success is attributable? The use of comb foundation has helped to give standing to the Wiley, sensational, artificial-comb-honey story. Shall we stop using foundation?

Rogersville, ♂ Mich.

* * *

For the American Bee Journal.

Honey-Interests, etc., of Florida.

JOHN Y. DETWILER.

Subsequent to the late cold wave I was in receipt of numerous letters from apiarists inquiring as to the prospects of securing bees, and other information relating to the apicultural resources of this locality—the east coast of Volusia County, Florida. Believing that what would in all probability interest those inquiring, would also be appreciated by the majority, I submitted my report of the damage as nearly as then could be determined, for which I am taken to task by a correspondent on page 217. My object was to dissuade any apiarist from locating in this section to engage in bee-keeping without first making a personal visit to see the extent of the damage for himself.

I will not enter into any discussion as to the extent of the damage done to the mangrove. Dr. B. F. Fox. county superintendent of public schools for Volusia county, who has been in Florida since the war, expresses his opinion that 99 per cent. has been destroyed. I should judge that 95 per cent., which I think will be admitted, is sufficient to warrant a personal visit before establishing an apiary. Mr. R. S. Nelson, of Eldora, 12 miles down the river, estimates 75 per cent. killed in his locality. Allow me to furnish an extract from a private letter from Mr. H. W. Funk, of Bloomington, Ills., who was recently in Florida looking up a location for an apiary. He says: "I was at Tampa during the cold snap; the mercury was down to 18° above zero. I did not think that they (the mangrove) were hurt much, although they looked black on the top. I hear from a boat captain who stopped at Cape Sable, that they were frozen down there. The orange trees were not hurt much. A few days after, the leaves dropped off fast. All pine-apples, bananas and cocoanuts were killed. Up along the St. Johns river, from Ocala to Palatka, the orange trees were frozen black, and most of the leaves stuck to them. I think that those trees were damaged or killed;" and in conclusion he remarks that the outlook does not warrant him in establishing an apiary in Florida.

A letter to the Troy *Kansas Chief*, from a former neighbor from Doniphan county, now at Orange Springs, Marion Co., Fla., says: "Of my orange trees the large ones were more or less injured, and the small ones killed to the ground. Lemons, grape-fruit, fig and Japan plums were killed to the ground; these are all put back two years in growth," etc. So much in reply to paragraph three of the article on page 217.

In reply to paragraph four, I will simply say that the article in question related to *the east coast* of Florida, exclusively, with the exception of the reference to the groves in the interior, which, from authority above quoted, will sustain my position. A vast difference exists between the east coast of Florida (the subject of the article on page 102) and the State at large. In proof, let the Hawk's Park correspondent, who so ably compiled the statistics of Florida's vegetable and animal production, furnish the parties he so anxiously wishes to locate here, through the AMERICAN BEE JOURNAL, with the exports from New Smyrna for the past few years outside of oranges, honey, and turtle, or other productions of salt water; then the readers will know just what they can expect to raise and export in order to keep up an existence; then the full import of his fourth paragraph will be made manifest.

As an inducement to show up the exports of New Smyrna, Daytona, or any or all other places on the Halifax, Hillsborough or Indian rivers, outside of oranges, honey, and the food products of salt water, I enclose the following clipped from the Halifax *Journal* of April 15, 1886 :

"Any one in the vicinity of Daytona 'showing up' a fifty, sixty, or a hundred acre orange grove, a ten acre corn, rice, sugar-cane, tobacco or cotton field, will secure the Halifax *Journal* for fifty years as a premium."

While we earnestly desire to secure good neighbors, and render every available means in our power to inform them of what they must expect should they locate among us, we do not forget that it is due to them that they should be truthfully informed on such subjects as are necessary for their comfort and welfare, should they locate among us. When necessary I propose to state facts when they are called for, so far as they have come under my observation. Instead of looking upon the dark side of the matter, I have unbounded hope for the future of the East Coast of Florida, and I would say that I know of no time better than the present to secure a home in this locality.

New Smyrna.⊙ Fla.

For the American Bee Journal.

Fall Feeding vs. Spring Feeding, etc.

J. C. RAWLINS.

In the article on "Honey for Bees in Winter," on page 247, by J. E. Pond, Jr., I think he hit the nail on the head about the consumer's idea when sugar is fed to bees. Why I think so, is that last year, in February and March, we fed 35 pounds of molasses sugar to 85 colonies, and some people think (or say they do) that is why our honey granulates. They say that *pure honey* will not granulate for 2 or 3 years after it is taken. It is very hard to get them to understand how honey is gathered in such large quantities.

I have been a close observer on the subject of feeding, and I think that bees should be fed early in the fall, and given a little more than you think they will consume by the middle of the next April. Colonies that were very populous last fall, but were extracted from late, and fed only a little, and that when the weather was cold, and have been fed this spring when very cold, are now weak. But those whose hives were left full of honey, and not disturbed until the past week, are very strong. We feed to stimulate brood-rearing, but if they have plenty in the hive the queen, according to nature, knows when to begin her part in the reproduction of her species.

Mr. S. J. Youngman, in his article on page 248, says: "The cells if left too long must be carefully watched, for when the first queen hatches the *bees* will destroy the remaining cells." But I think that the *queen* does this work. I think I have proof of this; for twice I have found the queen at work on the cell, one time I know that she was by herself. This was in a box-hive whose colony had been transferred *a la* Heddon, and a cell given at the time. But thinking that it failed to hatch, I raised the cover and placed one on the comb over the bees; in about two hours I looked in, and what a beauty I beheld! It was a fine yellow queen biting at the cell, and not a bee helping.

Another thing he said about bees swarming: "I have also known bees to swarm and not leave anything nearer a queen than newly laid eggs." That is a new idea for me. Was it a natural swarm? I am working in the apiary of Mr. Z. A. Clark. I am a hireling, but one that careth for the bees.

Arkadelphia, ♀ Ark.

For the American Bee Journal.

An Apiary in Ontario, Canada.

R. F. HOLTERMANN.

As Mr. J. B. Hall, of Woodstock, Ontario, is known as one of Canada's most successful apiarists, although not owning the largest number of colonies; and as it is also well known that he never wields the pen and gives any of the numerous bee-papers a report of his doings and the result of his experience, a description of his apiary will not be amiss.

The Quinby hive is used. The top-bar is square, not as formerly V-shaped. The bar (an inch deep, I think), I understand, acts in a measure as a honey-board, helping to keep the queen down, and the workers are less liable to build comb joining the lower story and supers. Perforated metal is used between the body of the hive and the supers or upper story. No drone comb is wanted for store comb, if there is no drone comb in the body of the hive, and the perforated metal is used to keep the queen from the upper part. The bees will not appropriate the drone comb above for storing honey, but true to the instinct to desire drones, they will leave the drone-cells empty for brood-rearing.

I fortunately arrived on the evening when Mr. Hall was going to remove his bees from their winter quarters, viz: April 19. The house and grounds being new, the water had obtained access to the cellar to a depth of 8 inches, and had to be pumped out; otherwise the bees, owing to the extraordinary season, would have been removed earlier. The temperature of the repository was at 62°, and the bees were clustering more or less about the hive-entrances. The stands, cushions, lids and half-stories were all ready outside, and a carrying-stand for 2 colonies, having four legs and a pair of handles for two men, facilitated the work very much.

The hives were piled in rows back to back, to the ceiling, or nearly so, and four or five abreast—over 200 in all. The men carried, Mr. Hall examined, and I—observed. The examination consisted of lifting the hive and tapping to discover the strength of its colony. An experienced bee-keeper will understand how carefully they must have been carried out to do this. Only one colony showed by the entrance any signs of diarrhea, and this had the disease since December. They appeared strong and flew well in the morning. Several others had starved, but the balance appeared to be in good condition, although Mr. Hall says that they were not quite as good as they were the previous spring. In their flight in the morning—which was a beautiful one—they spotted their hives but little. As nearly as one could estimate there were 3 bushels of dead bees in the cellar.

The brood-chamber is but little disturbed during the season, twice only, as a rule, for the purpose of examining their condition, in the spring and in the fall. Comb and extracted honey is produced, and the stock on hand consisted of no more than would be consumed in the house before the coming honey-season.

Mr. Hall breeds his bees not for color, but excellence as honey-producers, winterers, etc. They showed (with the exception of the various races he is experimenting with, for various experiments are in progress most of the time) a mixture of German and Italian blood. He keeps a record of what quantities of honey his colonies produce, and the results of his large experience convince him that he can produce 80 pounds of comb honey as readily as 100 pounds of extracted. Later I will give his interesting account of his experiment with the Caucasian bee.

Bees throughout this part of Canada have done remarkably well, storing and capping honey, and actually drawing out cells along the top-bars in full-framed colonies.

Brantford, Ont.

For the American Bee Journal.

Troublesome Bees.

JAMES HEDDON.

I have noticed Mr. Deer's questions, on page 314, and I do not believe that any one should move his bees because it is claimed that they are "troublesome." They cannot be expelled until the nature and extent of the annoyance is such as to legally declare them a "nuisance."

Some neighbor *may* be annoyed because they are handsomely paying their owner. Another, because he ignorantly thinks, or fears, that they work on the blossoms and injure fruiting. Again, others may think that because a bee sometimes gets into the rain-water barrel or pump, to their discomfiture, that all must go. It is not so at all.

Our relations with our neighbors are more or less a continual compromise, and a nuisance is something that causes sickness, or annoyance greatly disproportionate to its usefulness. Bees may become a nuisance, but I do not believe that Mr. D's bees have become such.

If we do not claim and defend ALL of our rights *now*, we shall sorely neglect a duty that we owe to the generation of bee-keepers that will follow us.

Dowagiac, ♀ Mich.

Local Convention Directory.

1886. *Time and place of Meeting.*

July 6.—Hill County, at Peoria, Tex.
H. A. Goodrich, Sec., Massey, Tex.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Oct. 12–14.—North American, at Indianapolis,Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Display of Honey-Plants.—Mrs. C. Robbins, of Indianapolis.⊙ Ind., Corresponding Secretary of the National Bee-Keepers' Society, writes:

The committee of arrangements for the National Bee-Keepers' Convention to be held at Indianapolis, Ind., on Oct. 12-14, 1886, think that a display of honey-producing plants and flowers from as many different States as possible would add considerable to the interest and educational feature of the Convention. Therefore, the committee invite such a display, and will arrange them in any a manner that is desired after reaching here.

Constructing a Honey-Room.—D. M. Imlay, (94—81), Seward,○→ Nebr., on May 15, 1886, writes:

Bees wintered well in this locality, and have made their living since April 8. I notice a few white clover blossoms, which, by the way, is rapidly gaining a foothold on the "Great American Desert." Our honey crop is still all from heart's-ease and buckwheat. My loss, as indicated above, is mostly from robbers, and on account of weak colonies to start with. Will not some of the "doctors" in bee-culture give us some information as to the construction of a room in which to store surplus honey, so as to have it as dry as possible, and yet have it clean and free from dust?

Fremont Progressive Convention.—Samuel Odell. Secretary of this new bee-association, gives this report:

The "Fremont Progressive Bee-Keepers' Association" was organized with 12 charter members at Fremont, Mich., on May 8, 1886, and the following officers were elected for the ensuing year: President, Geo. E. Hilton; Vice-Presidents, A. E. Upton and A. M. Alton; and Secretary and Treasurer, Samuel Odell. The membership-fee was placed at 25 cents for gentlemen; ladies to be admitted gratis. Then followed discussions on various topics of importance to bee-keepers, after which an interesting essay was read, entitled, "Does bee-keeping pay?" by Geo. E. Hilton. An invitation was extended to all who may desire to become members of the association, to give their names and 25 cents to the Secretary. The convention then adjourned.

Prevention of Increase.—7—A. P. Cowan (73—71) Grattan,+○Mich., says:

As I have not seen an answer to Query, No. 238, I will state that I have tried the plans usually recommended, and found them to fail in this locality. My plan is this: As the bees swarm, kill or make use of the old queen, and let the swarm return. After 7 days destroy all queen-cells except one, and it is done. At least I treated 40 colonies so last season, and not one swarmed again. I clip my queens' wings, for convenience.

Grand Season Expected. — P. P. Nelson, Manteno,○→ Ills., on May 14, 1886, writes:

For the past two years bees in this locality have been working on the reversible order. My bees went back from 40 colonies to 12, but now I have 27 good, strong colonies. We have had the most favorable spring for bees that I have ever experienced. The honey-flow began on April 22, and in 4 days the combs were glistening with honey, and new comb was started. Everything indicates a grand season for bees and honey.

Colony Taken from a Bee-Tree.—R. M. Burwell, D. D. S., of West Winsted,↝ Conn., on May 14, writes:

Last fall I found a bee-tree that had been cut. The bees were clustered on a limb and were building comb there. They had dwindled to about 4 quarts. I brought them home in a tin pail and put them on full sheets of foundation; fed them granulated sugar syrup, and left them on the summer stand. (This was in September.) They wintered, and are strong, and as good as any of my colonies. I enjoy looking over my bees, the honey I get from them, and more yet, the reading of the Bee Journal.

Driving Bees, etc. — Lorenzo J. de Sobotker, Riverton,↝ Miss., on May 11, 1886, writes:

The weather here has been very propitions, pleasant and warm for bee-keepers. For the last week the bees have been doing well, increasing in brood, colonies growing into strong ones, bees working upon honey locust, hawthorne, white clover, and some minor bloom, and storing in the surplus arrangements. I have found, this season, that from the middle of April until now, driving bees *a la* Heddon, from "gums" into movable-frame hives, is the best plan of transferring, and keeps down swarming thereby. I accomplished the same results in the movable-frame hives by the use of the honey-extractor.

Colony that Does Not Swarm.—L. R. Williams, Paris,δ Texas, on May 17, 1886, says:

Bees are gathering some honey now, but are not swarming much. Colonies are strong, and they work well. I have one colony of Italian bees that are the best honey-gatherers I have. It has a fine, large three-year-old queen, and they have never swarmed. It is a strong colony, and has a great many fine drones. Does any one know why they do not swarm? (My brood-chamber is 12½x16½ inches, and 11½ inches deep; and the honey-chamber is 12¼x16½ inches, and 5½ inches deep, each containing 11 frames.)

Holly.—A. A. Dodge, Palma Sola, ♀Fla., on May 7, 1886, writes:

I send a specimen of a honey-plant and also a piece of honey-comb made from its honey. Will you please name the plant? It is nameless in this part of the country. The bees are gathering honey from it, and also from the scrub-palmetto. Bees are 40 days behind the usual season, on account of the cold winter and spring months; but they are now prospering finely.

[The plant is *Ilex glabra*, one of the many species of "Holly."—T. J. Burrill.]

Fine Weather for Bees.—J. H. Andre, Lockwood,♀ N. Y., on May 13, 1886, says:

Bees seem to be doing just fairly well. I think that if some who are talking about their bees booming and rushing, would examine the hives well they would find nothing better than last season, that came through the winter well. We have had very fine weather, however, for about 35 days, and the bees have not been shut in a single day—only a part of a few days on account of showers. I fear a drouth now, which will be very bad at this time of the year, as the season is the earliest it has been since 1865, and clover will blossom in a week or ten days. A dry time now would shorten the crop very much, but our old stand-by, raspberry, will help us along as usual. Fruit trees have about half of a full crop of blossoms, and a week or ten days earlier than usual. We have not had enough frost to kill anything since about April 5.

Cloudy, Chilly May.—Jas. McNeill, Hudson,○↝ N. Y., on May 17, 1886, says:

I had my first swarm of bees on May 14, on which date fruit bloom closed—two weeks earlier than usual. Bees have wintered well. In my home apiary out of 155 colonies only 2 were queenless; nearly all the rest are in fine condition. We have had a cloudy, chilly, wet May so far; so that bees did not get much more than a living out of fruit-bloom.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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THOMAS G. NEWMAN & SON,
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At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondence.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

"**Don't Stop**"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 24, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2-lb. sections, 9@12c.

BEESWAX.—23@24c. per lb. Not much offered.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@80c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—White and ex. white comb, 11½@13c.; dark comb, 6½@8c. White extracted, 5¼@5½c.; amber, 4@4½c.; dark and candied, 3¾@4c.

BEESWAX.—Quotable at 20@23c., wholesale.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½.

BEESWAX.—Firm at 22c for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—There is an excellent demand for best 1-lb. sections of white honey, and all arrivals sell readily at 14c.; 2-lbs. and glassed sections sell slowly at 12c. Extracted, 7@8c.

BEESWAX.—Scarce at 25@28c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market seems quite dull for all qualities of comb honey, with but a moderate demand for extracted. We quote: Choice, white 1-lb. sections, 17@18c.; the same in 2-lbs., 16@17c.; dark 2-lbs., 15@16c. Extracted, white, in barrels or kegs, 7@8c.; dark, in same packages, 6@7½c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

◆

Frank Leslie's Sunday Magazine for June, 1886, is especially noticeable for its numerous full-page illustrations, some of which are exceptionally fine. The Luray Cave, in Page Co., Va., is the subject of several fine cuts. A beautiful picture is a reproduction of a painting by Augustin Lhardy, entitled "Preparations for a Day in the Country"; and a number of contrasted scenes on the two rivers, the Rhine and the Hudson, give some idea of the beauty of these two famous streams. An antiquarian interest attaches to the article on the first edition of the "Pilgrim's Progress," with reproductions of its quaint engravings and a *fac simile* of the text. A beautiful reproduction of one of Giacomelli's bird-pictures shows the helmet-crested humming-bird and its nest. Many other beautiful pictures fill the number, while the literary portion is up to the high level of this favorite family magazine. Published by Mrs. Frank Leslie, 53—57 Park Place, New York.

Frank Leslie's Popular Monthly for June, 1886, opens with a very vivid sketch of the statesman who at this moment rivets public attention—Wm. E. Gladstone—grappling boldly with a problem which for a century has taxed the intellectual powers of the leading men in power in England—a government for Ireland which shall insure the well-being of the people and retain the Island as contented part of the British Empire. All the articles savor of the pleasant summer days; and the stories—by Mrs. M. A. Dennison, Jane Fay Alston, Chas. H. Shinn, Annie J. Duffell, and others—make this number a charming one to read at home, or travelling, or stretched in breezy shade.

Advertisements.

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HAVING sold my bees on account of removal, I have 600 brood-combs to sell (Adair frame 13x11¼), built on foundation; also some part drone comb for extracting. Delivered at depot here at 12 cents each. Fifty good hives, for above, holding 13 combs, very cheap. Also 100 pounds of nice wax. Can send by American, U. S. express, or freight, via Chicago. What have you in exchange for the above? For particulars, address
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2-fr. Nuclei—untested queen.	3 00	2.75	2.25

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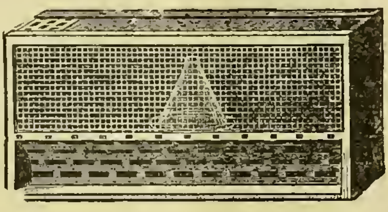

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200 **COLONIES** of Choice Italian Bees for Sale. For terms, address,

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13A9t YOUNGSVILLE, PA.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. June 2, 1886. No. 22.

Mr. George Grimm, of Jefferson, Wis., was married to Miss Marietta Bullock, on May 20. They took a wedding trip to St. Paul, Minn., and will be "at home" on the 10th of June. The BEE JOURNAL extends its best compliments.

◆

Jordan's "White Sulphur Springs," near Stephenson Depot, Fred Co., Va., opened on June 1, and will continue until Oct. 1, 1886. The 20-page circular is on our desk. Mr. E. C. Jordan, one of Virginia's most prominent bee-keepers, is the proprietor. Honey is one of the delicacies provided without stint to his guests.

◆

In England the spring is said to be fully a month later than usual; while in the central part of the United States it is quite a month earlier than usual. A correspondent in England remarks that up to May 1, there had "not been more than six days free from frost this year, and no three days only have the bees carried natural pollen briskly." This is a strange report for that "garden spot of the earth." Usually the month of May is delightful there, and the fragrance from the universal bloom fills the air with the loveliest of perfume.

◆

The Oleomargarine Lobby at Washington has issued a pamphlet for circulation to Congress, entitled "Honest Words to Honest Men." The idea of the makers of that fraud—imitation butter—claiming to be honest, is too absurd for anything! Is it honest to call their product butter, sell it for butter, and get the price of butter for a fraudulent imitation? Congress has now spent a week over the consideration of a law to tax it out of existence, but so far but little has been accomplished towards that desired end. Can we ever hope for that body to pass a law against the adulteration of honey and other food products? Our faith in its accomplishment is very *weak*—we cannot expect it.

◆

N. E. Cottrell, Burdick, Ind.—Circular of Bees and Queens is received.

Another Suit Against Bee-Keeping.—Mr. Marshall J. Darling, of Waterbury, Conn., has been sued by his neighbor, Geo. Stanley, in the District Court for $500 damages. The trial comes off on June 7, 1886, and good lawyers have been engaged to try the case. Mr. Darling gives the following facts concerning it:

I am a mechanic, and work in the shop. I have for 4 or 5 years kept a few bees both for pleasure and profit. Last year they increased from 8 to 19 colonies. The plaintiff, George Stanley, owns an adjoining lot; five families live there, in two houses. In March Mr. Stanley told me that his tenant would move if I continued to keep bees, for they came in at the windows and stung the family; and also spotted clothing around the house. I told him that if he would put screens on his windows I would pay for them, but he refused to do that. He says I must get rid of them. I told him that I never have had any trouble with my neighbors, and did not want any, and I would sell all that I could of them. I sold 8 colonies, leaving 11. Now they have commenced to swarm, and I have had two swarms this week. A few days before Mr. Stanley brought this suit, I had arranged to move my bees into the country, where I could keep more of them, but my lawyer tells me not to move them now.

It seems that this is to be a test case, to ascertain whether it is lawful to keep bees in the suburbs of a city or not, and will affect many who now are engaged in the pursuit in that State.

It appears that Judge Cole has issued an injunction, restraining Mr. Darling from keeping bees on his premises on Cossette Street.

The New Haven *News* of May 22 contains the following concerning the suit:

It is thought that the vexed question, which has long troubled legal minds in this locality, will be settled in this case, namely, whether bees are "feræ naturæ."

This question was encountered in a pleasant controversy out of court some years ago between Judge John W. Webster and Farmer Plumb, of Prospect. Judge Webster was excessively pleased at discovering bees in their wild state, an autumn pastime in which he is an acknowledged expert. The mode of spying out the home and honey of the wild bee requires unusual sagacity and patience. A number of bees must be captured in their flowery haunts about the fields, confined in a small box, taken to high ground, and one by one allowed to escape from different points. They always fly in a bee line for their primitive hive, usually hid in a hollow tree. It may be a mile or more from the place where they are captured, but the point whither the different lines converge is a sure indication of their home. On one occasion the judge had found a hive in a very large oak tree, one of the finest in a large forest owned by Farmer Plumb, of Prospect. A neighboring chopper was secured and set to work. While he was thus engaged, Farmer Plumb came down to the bee-tree with an old Queen Ann musket on his shoulder, and opened conversation with the judge by exclaiming:

"What are you doing here?"

"Exercising the inalienable rights of an American citizen," replied the judge.

"Haven't I any rights here?" asked the farmer. "I bought this wood land forty years ago, and paid hard-earned money for it. There is no mortgage on it, and I supposed I had some rights in it."

"True," replied the judge, "you have some few rights, but I want you to understand that my rights to this particular tree are paramount to your rights. The ancient custom of acquiring possession of a bee-tree and its products ought to be well known to you."

The question was argued at length *pro* and *con*, and during the controversy the farmer threatened and made demonstrations of violence with his musket. The judge, undaunted, walked towards him and assured him that during a long acquaintance with the law he had become familiar with its principles in regard to bees.

"Those bees," said the judge, "are 'feræ naturæ,' and no law is better settled than that where a man finds bees 'feræ naturæ,' he is entitled to the bees and the means of securing the honey."

The judge then ordered the tree cut down. This version of "feræ naturæ" was too much for the old farmer to grasp. His musket fell from his hand, and he staggered back, bewildered, against the fence.

The judge secured a large quantity of honey without further interference, and although the issue was never tried, it seems that to this day the common law of the land declares some bees to be "feræ naturæ."

◆

Dividing for Increase.—A correspondent who is a beginner, desires to learn how he may with safety avoid watching for natural swarms, in order to hive them. He should either use a swarm-catcher or divide for increase, instead of letting the bees swarm. Mr. F. L. Dougherty, in the Indiana *Farmer*, gives the following instructions:

The proper time to make a division is just about the time the bees have begun preparations to cast a natural swarm. This can only be determined of course by examination of the frames. If, on opening the hive, you find queen-cells are being built, you know, of course, what to expect; although cells may be started and afterwards abandoned, but if on examination you find eggs or young larva in the queen-cell, it is hardly necessary to wait longer, but make the division at once. In natural swarming, the old bees, with the old queen, constitute the cluster, consequently the division should be made to follow this rule as near as practicable. To do this open the hive near the middle of the day, take out one frame of bees, brood, honey, and the old queen, place this in the new hive, remove the old hive to a new location, setting the new hive where the old one formerly stood. Bees know little of the hive, but are governed by the location. The bees that are in the fields and all the old bees in the hive removed, as they go out will return to the old location and enter the new hive; thus throwing the working bees into the new hive where the work is to be identical with that of natural swarming.

◆

Rich, Blooming and Variegated as the roses of June, comes the *American Agriculturist* for this month, with its one hundred original illustrations and original articles, by forty-four well-known writers in various parts of the Union, from the Atlantic to the Pacific. The second paper, in the series of the Homes of our Farmer Presidents, will be written by Donald G. Mitchell (Ike Marvel); subject, George Washington. The accompanying engraving will probably be as large as that of Jefferson's Home, which was the first of the series, to-wit: 27 inches long and 17 inches wide. The engravings of Our Farmer Presidents are to be presented to all subscribers of the *American Agriculturist* as they appear. Price of the *American Agriculturist*, English or German, $1.50 per year. We will club it with the AMERICAN BEE JOURNAL for $2.25 a year, each subscriber to receive both papers and the special engravings and descriptions by American authors as they appear.

◆

Honey in Coffee, says a correspondent in the *Bee-Keepers' Record*, is better than sugar; this is a most excellent way to use it when candied, especially by those who have a prejudice against eating it. He then adds, "Try it also in tea."

◆

F. J. Crowley, of Batavia, N. Y., has sent us his reduced price-list for this spring.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Taking Care of Empty Combs.

Query, No. 258.—1. What is the best manner of taking care of empty combs to prevent bee-moth from destroying them, until such times as they can be used? 2. Will the bee-moth molest the combs if hung in a rack 3 or 4 inches apart, in a dry and airy room?—Subscriber.

1. I have the best success by hanging them up in a dry, light room. 2. You will have to look after such combs as contain bee-bread, no matter where you put them.—G. W. DEMAREE.

The plan suggested is good. If worms are already started, the combs must be heavily fumigated with sulphur.—C. C. MILLER.

The plan suggested is the best I know, but the moths will trouble them some even then. If they trouble too much, fumigate them.—W. Z. HUTCHINSON.

1. Putting them where the bees can have access to them, or by burning sulphur in the room in which they are stored. 2. To a certain extent, yet it helps wonderfully.—G. M. DOOLITTLE.

I have but little trouble if the combs are in a dry, airy room, but they should be carefully examined from time to time, and if you find any trace of moths on the combs, fumigate them with sulphur.—H. D. CUTTING.

Combs containing pollen are unsafe hung up in a dry, airy room if moths can get at them. As suggested in this department last year, there is no better plan than to stack them up in empty hives over a strong colony of bees.—G. L. TINKER.

2. No, not if not too warm, and left there too long. Your second question gives my idea of the best solution of your first.—JAMES HEDDON.

I always keep my combs in a perfectly close box, in which they are hung. They are then never troubled with moths.—A. J. COOK.

Put them in a cold room carefully boxed up. If they are kept there during our cold northern winters, the moth will not hatch out of them, and by using screen doors and windows the moth can be kept out of the honey-house all summer as well. We keep thousands of extractor combs every season, and never have any trouble.—DADANT & SON.

1. If any moth worms are seen, give the combs a vapor bath with fumes of burning sulphur. 2. The worms are not apt to be found in combs placed as mentioned; but frequent examinations should be made, and the sulphur fumes applied when worms are found.—J. E. POND, JR.

Lubricating Foundation Dies.

Query, No. 259.—Does the use of lye in lubricating dies of foundation presses injure the foundation or make it disagreeable to the bees? A neighboring bee-keeper claims that it makes the foundation brittle, and that he has hard work to make bees stay in the hive when it is used.—J. M.

I should say not, when some of our shrewdest and best bee-keepers have used it for years.—A. J. COOK.

I have used foundation that was made by the use of lye, and that which was made by using starch; I have noticed no difference in the respect mentioned.—W. Z. HUTCHINSON.

The honey-bees have no use for an alkali in their fabrications, and it would not be strange if it were disagreeable to them.—G. L. TINKER.

I have used foundation made by manufacturers who use lye as a lubricator, and I never had any trouble on that account. A great deal of foundation is worthless on account of its being made of wax rendered from moldy, rotten combs.—G. W. DEMAREE.

So far as my experience has gone, I have found no trouble from it.—C. C. MILLER.

I am certain that lye injures the quality of the wax. Try a small quantity by melting it with a slight trace of lye, and then compare it with a sample of the same wax not thus treated.—H. R. BOARDMAN.

Any material which you use *on a press* will remain on the foundation, more or less; and will be more or less injurious; hence, the inferiority of the *presses*. We should certainly not use lye in any case.—DADANT & SON.

I have used foundation made with lye, starch and soap, and I could not see any difference. I have had no trouble in having the different kinds accepted by the bees.—H. D. CUTTING.

No. If you will put a piece of foundation or wax into lye ten times as strong as the die-book needs, you will see that it does not affect it at all. The bees do not shun the lye-residue, as I know by careful experiment.—JAMES HEDDON.

Superseding Queens.

Query, No. 260.—1. Would you supersede a queen on account of old age, as long as the colony is prosperous? 2. What is the best general rule in regard to superseding queens?—H. D. S.

1. It would depend upon circumstances. 2. The third year.—H. D. CUTTING.

1. No. 2. Let the bees do the superseding.—G. M. DOOLITTLE.

1. No. As long they do good work leave it to the bees.—A. J. COOK.

1. No. Let the bees do it.—W. Z. HUTCHINSON.

1. No. 2. Supersede queens only when they show signs of decline.—H. R. BOARDMAN.

1. Not unless I desired to change the stock. 2. A very good rule that rarely fails in getting good queens is to let the bees do their own superseding.—G. L. TINKER.

1. No. 2. Supersede them when they begin to fail, or else let the bees do it. They usually do it before you can notice that the queen is failing.—DADANT & SON.

1. I do not recommend the practice of superseding queens on account of age. The bees know better when to supersede than I do. 2. The best rule is to leave it to the bees. They may make some mistakes, but the apiarist will make more mistakes than the bees will.—G. W. DEMAREE.

So long as a colony is prosperous, I doubt if I would take great pains to supersede her, leaving that for the bees to do. But if by swarming or otherwise, a queen should come into my hands at a time when I could easily replace her with a younger one, I would most likely replace her if she were two years old, or older.—C. C. MILLER.

1. No. 2. As soon as the queen fails of normal prolificness, put a young one in her place if the bees do not do it before you, which they usually do in my apiary.—JAMES HEDDON.

1. No sir, as I replied awhile ago, I now have a queen five years old this spring, and I shall not supersede her, if she keeps the cells filled with eggs. 2. Supersede when the queen shows failing powers, or when you desire for any reason to make an exchange.—J. E. POND, JR.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⊸ northwest: ⟜ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Robber Bees—Pollen in Sections.

G. M. DOOLITTLE.

Robbing in early spring is one of the most vexatious things that a bee-keeper has to contend with. There is no other season of the year that the bees are so persistent in stealing as at this time, and for this reason the plans that work well in stopping robbing at other times, are of little value now, especially as the colonies usually attacked are those weak in bees, so that as strong resistance cannot be made as at other times. Having had quite a trial with robber bees this spring, and coming off victorious, I thought perhaps the readers of the BEE JOURNAL would like to know how I conquered.

At first, as soon as I found a colony being robbed, I used the old plan that I had always used, which was, carrying the robbed colony into the bee-cellar in the evening and leaving it in there for a few days until the robbers had forgotten the place of attack, when they were put out again. Of course, before putting them in I put in food for them if I had reason to believe that they were robbed short of stores.

This plan usually works well if the colony is not too weak, and I much prefer it to most of the plans given for stopping robbing. But I happened to have 2 colonies which were quite weak, and every time I put them on their old stand again, they would allow the robbers to enter their hive unchallenged. Presently a thought struck me, and near sunset I threw the entrances of these two hives wide open and watched till I found that there were only four colonies in the yard which were doing the robbing, as all the rest of the bees had stopped flying by this time, while these 4 kept busy at work carrying honey from these two hives until nearly dark. When night stopped operations I fed these two weak colonies and carried them to the cellar.

The next day, at about 11 a.m., I took a wire-cloth cage and a large funnel used in forming nuclei, which I have before described in the BEE JOURNAL; I then went to one of the colonies which was doing the robbing the night before, and taking out a frame well covered with bees, I lightly tapped it so as to cause the bees on it to fill themselves with honey, when it was hung in a covered box. I then went to the second hive marked the night before, and took a frame of bees from that in the same way, being sure in each case that I did not get the queen. The bees on the first frame were by this time well filled with honey, and were shaken down through the funnel into the box, while those from the second hive were put in with them as soon as full of honey.

The box of bees were now put in a warm room, and an empty hive placed over them to keep all dark. Bees from the two other hives marked were put in another box and treated in the same way. In about an hour a loud roaring was heard in these two boxes, showing that the bees had by this time realized their queenless and lost condition, but they were left undisturbed for three hours more, or until 3 o'clock. At this time I went to the cellar and got the queen from each of the weak colonies, marking which came from each hive, when one was put into each box of bees. They were now left until nearly sunset, when they were found all clustered and quiet like a swarm. In less than one-half hour after the queen was given them, all was quiet, thus showing how glad they were to have the queen.

At sundown the two hives were brought from the cellar and put on their stands, when the frames were spread apart in the center of the little cluster of bees, and the bees from one of the boxes shaken down between the combs to the bottom-board of the hive. In going down they took with them most of the bees on either side of the opening between the frames, so that a general mixing was the result. The combs were now put back in their places again, and the hives closed.

In the morning I took solid comfort in seeing these bees seize their own comrades of less than 24 hours ago, when they came to the usual stealing-place for honey. These robbers would no sooner touch the alighting-board than their own sisters of yesterday would catch them and treat them as all robber bees are treated. The result proved that all robbing was at once effectually stopped; the two weak colonies are now fairly strong, while the robbing colonies were not materially injured.

POLLEN IN SIDE-SECTIONS.

A correspondent wishes to know how I keep the bees from storing pollen in the side sections, where I place brood behind, so as to coax the bees to work in them at once, as I have given in the BEE JOURNAL.

In reply I would say that I do not think that I have had 50 sections in all my experience with pollen in them. As I use separators, the sections coming between the separators and the thin division-boards used in my hive, has a tendency to keep the pollen out. Again, the frame of brood is only left behind the sections until a good start is made therein, when it is taken out, the partly full sections moved back where the brood was, and a wide frame of empty sections put between it and the hive. If the frame of brood were left longer there might be pollen stored in the sections; yet I think there would not be much where both separators and division-boards are used.

Borodino,⊙ N. Y.

For the American Bee Journal.

Taxation of Colonies of Bees.

W. J. ROBERTS.

On page 309, Mr. T. B. Blair asks whether bees are subject to taxation. He pretends to offer no reasons why a man should not be taxed for his bees, except the one that when his tax is due he may not have (because of the rigor of winter, or some other cause), the bees which have previously been assessed. The same line of argument might, with some force, be urged against taxing a man for anything in the nature of property personal. All that lives is liable to perish, and all inanimate things are liable to be destroyed or carried away.

As to what is subject to taxation, Desty, in his work on that subject, on page 51, says: "When there has been no compact with the Federal Government, or cession of jurisdiction for purposes specified in the constitution, the right of taxation by the State reaches all the *property* and business within the State," citing among other cases the following by the Supreme Court of the United States: Nathan *vs.* Louisana, 8 How., 82; Prudence Bank *vs.* Billings, 4 Pet., 514; McCullouch *vs.* Maryland, 4 Whart, 316.

If bees can be considered property, there can be no question as to their being liable to taxation. Whether or not they are property in the eyes of the law, depends upon the condition in which they may be found. Animals are divided into two principal classes, one of which is wild, and the other tame. The latter class are subjects of absolute property; the former are not, while at liberty and unreclaimed. Bees belong to the wild class. If they exist in a hollow tree on a man's land, they cannot be claimed as his property. To be sure, if a stranger should go on the land and disturb the bees, he would be guilty of a trespass; but interference with the bees would constitute no element of damage. But should the owner of the land take the bees from the tree and hive them, they would then become his property.—Gillet *vs.* Mason, 7 Johns., 16; and they would continue to be, so long as they should remain in his possession and under his control; and they are considered under his control so long as he can identify them, and is able to regain his possession of them.—Goff *vs.* Hills, 15 Wend., 550.

As there is no constitutional provision either Federal or State, prohibiting the taxation of bees, they are subjects of taxation when hived, if the legislature shall choose to exercise its power. Here in Iowa the local authorities have no right to assess a man's bees for taxation, as they are exempt from taxation by legislative enactment. The legislature has undertaken to enumerate such animals as may be assessed, and bees are not included in the list.

Keokuk,○↘ Iowa.

For the American Bee Journal.

Management for the Most Honey.

W. M. WOODWARD.

This is the one subject of the most practical interest at this season to every bee-keeper. How can I obtain the most honey? Limiting the subject to comb honey as the one presenting the serious difficulty, and the time to the honey harvest, I would proceed as follows:

I would use a hive adapted to tiering-up, and so arranged as to have the comb-building done in one single space. Nothing is made by dividing the work of the young bees into two, three, or more places. I have held that side-storing with top-storing must pay best; but after testing it well I find that my old colonies adapted only to top-storing have outdistanced those—their equals—with work divided between the top and the two sides. The use of divided labor brings about substantially the same conditions as so many weak colonies, hence less work is accomplished than in a single body. My present view is that a case 12-inches wide, or 12⅛ inches, is wide enough, and should contain four rows of 4¼x4¼ inch sections. I would make the brood-chamber the same size as the surplus case inside and outside, and use 9 frames.

The next point which I much desire to make, is to get as many frames *full* of brood as possible, up to the white clover harvest; and then contract to just that space and hold them there, or try hard for it, at least. I have found but little difficulty in keeping plenty of brood in the hive if I could only get the honey out of the way; and I think it is desirable to produce much more brood than some recommend during the honey season. I wish to breed only from my best bees, and to get all the good queens I can from them early, and want all the brood I can get to build them up for the late honey-flow.

My next procedure is as follows: Supposing that we have arrived at the opening, or the beginning of the bloom of the surplus crop; with hives full of bees and frames full of brood, and that with special attention to getting it well up to the top-bars of the frames. I make it a point to have on hand sections with nice, drawn comb to fill one case all round; but if not, I put what I have on the strongest colonies, and raise them as fast as they are filled, or have bees to use them, taking cases in which the bees are at work (if honey is coming in fast), bees and all, and placing them upon the next best colonies until all are at work in the surplus department with a will. I then shade well and raise the cases, placing empty ones (always filled with full sheets of foundation) under them, and thus keep them on the jump until the end of the crop.

The point of danger is this: Bees work upon only *one idea*, and the successful bee-keeper is the man who is able to dictate what that idea shall be, *i. e.*, whether they shall gather honey or rear queens and prepare to swarm. The "nick of time" is the opening of the first surplus-yielding flowers. The power to control lies in opening an abundance of room ready to receive their first honey, so as to get the *very first*, and all, as nearly as possible, in the sections. I do not have the majority of my colonies swarm when able to carry out this plan, and yet I get my full complement of increase by moving every old colony that swarms, and dividing them up so as to save all the best queen-cells, and then build them up as described above. It is my aim to run every colony through without swarming, except those from which I wish to breed. Those I encourage to swarm early, and sometimes remove the queen and brood and compel them to rear queens from the egg.

When swarms occur, I count it no loss, but proceed to hive them on 3 wired frames with full sheets of foundation; and I now use side-cases made to hold sections crosswise of the frames and cases, and filling the vacant space of the hive. This is the only way I have found side-storing to pay, and with swarms it does pay, and pays well; as I have no difficulty to get my honey finished off nicely at the side, even better than at the top, and that without the use of separators.

The brood-space is then spread, as the queen requires space, but I am to get and keep every pound of honey in sections if possible until September, when they will be sure to store in honey for winter, in most seasons. I use only frames enough to accommodate the queen in the start, preferring to have all the bees at work on surplus. The same bees which draw out the first three combs will draw a fourth and a fifth, and care for the brood as fast as they are done, so I make the same amount of bees attend the queen, fill the hive with brood, and work on surplus.

Last year was one of the poorest honey years since I have kept bees; and yet my best colony—the only one that went into the honey-harvest in good condition—yielded very nearly 150 pounds of comb honey, which brought me more than $19 in cash. Others—some of them very weak last year—used most or all of the clover crop to build up on; but none produced less than 40 pounds during the season. Seven colonies, all that the winter left me out of 47, gave about 475 pounds of comb honey during the season.

A neighbor bee-keeper of years' more experience, and having about 50 colonies in short Langstroth frames, and using "comb honey-racks" and sections, and all the usual fixtures, but perhaps less careful on the points I have urged above, reports from as good or better location than mine, 175 pounds of honey all told; and few reported any surplus around here last year.

Bees have wintered badly out-of-doors in this locality for four years, but mine all wintered in the cellar. I have a remarkable crop of willow honey this year—ten-frame hives filled and new comb built from starvation fare.

Custer,♂ Ills.

For the American Bee Journal.

The Winter Stores of Bees.

JAMES HEDDON.

I am surprised at Mr. Clarke's claims on page 293. Is it possible that a man like Prof. Cook—a man we all have to look up to as authority in these matters—should "put a quietus on the 'pollen theory,'" and never realize it, but all the time think that he was stating truths that sustained it? Is it not more likely that Mr. Clarke and some others have understood only a part of the Professor's essay?

Mr. Clarke tells us that the pollen theory went down when Prof. Cook stated that bees could not breed without pollen, and that we know that they do breed in confinement and come out in good health in the spring. Why, certainly, we knew this before the pollen theory was conceived, and this fact in no way disproves that theory. We are having a hard time to impress our opposition that pollen will not cause diarrhea in a bee, unless that same bee consumes the pollen. Bees making chyme to feed brood, do not consume the pollen, for two different individuals cannot both eat the same food. In my article on page 213 of the AMERICAN BEE JOURNAL for 1885, I quote from Prof. Cook as follows:

> "The fecal mass is mostly in the intestines; sometimes it is so abundant as also to crowd the true stomach. It is not likely that the alimentary canal back of the honey-stomach, and true stomach, are ever used to form the larval food; I think not, back of the sucking or honey-stomach. If the pollen is used up for larval bee-food, it could not appear in feces."

Now this "fecal mass" is pollen first, and pollen last, and pollen all the time; and this "mass" is the cause of the intestinal disease that destroys our colonies in winter and spring. If it were true that pollen can, under certain conditions, be safely consumed in confinement, whether voided dry or otherwise, it still remains a fact that this ruinous fecal mass is pollen, and this fact leaves more of the "pollen theory" than is now left of any other wintering theory that has been sifted by the reason and experience of bee-keepers, it seems to me

I have no faith, however, in the "dry-feces theory." It seems to me that if that hypothesis were correct, it would have ceased to be a theory long before any of us were born, and would have been clearly defined science. I see no reason why this would not have been the case. On the other hand, it is only now and then that some one is able to find a few droppings that *seem* to be excreta, and in nearly every case chemical analysis proves they are not. On this point, last year, Prof. Cook said: "There is no foundation in the dry-feces theory, I am sure." Again: "Bees do not normally void feces in the hive, and never dry feces." I can see no place for the shadow of a doubt, but that fecal matter is *the* cause of the all destructive bee-diarrhea; and that such matter is composed almost entirely of pollen, *i. e.*, its solid part—the only damaging part.

The majority of the readers will recollect that about a year ago I sent specimens of excreta and pollen to Prof. Cook for analysis, and that he reported as follows:

"I have subjected the pollen to a very careful examination with a one-sixth objective. I find several kinds of pollen grains, two of which are by far the most common. One is oval, rather pointed at the ends, with a longitudinal slit and numerous projections; the other is globular and thickly set with projections much like those in the other. I then studied the excreta, and had some one else made the change, I should have stoutly maintained that the objects were the same that I had just studied. The kinds of pollen were exactly the same in style and markings. The pollen you sent had been liberally appropriated by the bees whose excreta you sent."

I suggested that the Professor seek some diarrhetic specimens near his home, which he did, and reported as follows:

"I went to a neighbor's bees, all of which are dead, and I took three with long, black, turgid bodies and dissected out their alimentary canal as before. The stomach and intestines were fairly bursting with repletion; slight pressure sent the black, odorous excreta flying. This was almost one exclusive mass of pollen-grains held in a watery mixture."

A few weeks ago I mailed him specimens of diarrhetic excreta from 2 colonies that died with the disease, and the following is his report: "The thick feces is loaded with pollen of various kinds, and is largely insoluble in water. It has also many spherical fungi. The other also has much pollen, but less. It also has the spherical bacteria or fungi, and in addition, some forms which are chain-like in appearance. This is more soluble than the other, but after boiling for some time in water, there is quite a residue that is insoluble."

It will be remembered that I have all along declared that I believed the trouble rested with food and temperature, and that natural stores were not safe at all times and in all places, even if the temperature was kept up to a proper degree. I said that I did not believe that bees would devour bee-bread if not exposed to a low temperature that caused exertion, and consequent waste of tissue, but that I thought that our honey frequently contained an amount of floating pollen, that the bees necessarily consumed when such consumption could only end in diarrhea, and do no good in any direction.

Mr. Barber and others living in different localities, thought differently, and believed that temperature alone would insure success with good, average, natural stores. Their experience made it look so. I am not inclined to be bigoted, and I began to hope that they were nearly right. My "hope" was rather a larger share of wish than expectation. However, $600 for sugar (cash down), with 20,000 pounds of honey unsold, was (and is) an argument in favor of natural stores, wherever they will do, and will be such until we can realize cash at will for our product, the same as for wheat, corn, etc.

I fed a part, and most of that part only part sugar-syrup stores. I tried damp and dry cellars; I tried fresh air and stagnant ventilation, or almost no ventilation at all. A bee-house was dry and ventilation reduced to the minimum; one cellar was damp, and nearly as poorly ventilated; another was dry and well ventilated; in all, the temperature was kept between 45° and 50°, Fahr. I could discover no effects from humidity or ventilation. No colony on all sugar syrup showed any signs of bee-diarrhea. Those with mixed stores had it only when they reached their natural stores, whether the change of stores was the cause or not. Over one-third of my colonies had it more or less toward spring; a portion died of it, and I am left on the old stand. Pure and only sugar syrup stores will warrant certain success in this locality.

Twice have I brought a large number of colonies through in perfect condition, with no pollen in the combs, and although they did not and could not rear any brood till they gathered new pollen, they were my strongest colonies when the surplus harvest came. The old bees, having vitality, did not drop away as usual, so when increase began it gained surely and rapidly. With my many experiments, I expected to lose a number of colonies, but that number was larger than I looked for, only proving against my desire, that I have been nearer right about the matter of food *vs.* temperature than I wish I was; and that *I* must look to cane-sugar for perfect success, or take the chances with natural stores.

Dowagiac,⊙ Mich.

☞ The 5th regular meeting of the Hill County Bee-Keepers' Association will be held on the first Tuesday in July, 1886, at the apiary of Hon. J. M. McDaniel, of Peoria, Tex. At the same time and place will be held a bee-keepers' honey picnic.

H. A. GOODRICH, *Sec.*

For the American Bee Journal.

Frozen Fish in Florida.

JOHN Y. DETWILER.

Shortly after sending my communication on page 60, I received the following which the writer wished me to reply to through the columns of the AMERICAN BEE JOURNAL. Realizing that it is outside of the style of articles usually sent to the BEE JOURNAL, yet to satisfy our friend an explanation may be in order. The writer says:

"In your communication on page 60 you say that 'fish have been frozen by the thousands, green turtles are floating on the water perfectly benumbed, etc.' That is something that we Kentuckians never saw. Nor did I ever hear of fish freezing. Were they in the river, lakes or ponds? Perhaps you are joking. Doubtless you are truthful, but the tale seems big. You promised to report later. Will you please give the readers of the AMERICAN BEE JOURNAL an explanation of your 'fish story?'"—M. D. L. C., Texas, Ky.

Persons accustomed to write for the press are, from time to time, criticised more or less severely, especially if their statements seem exaggerated, or, as in this instance, "fishy." So far as my articles are concerned, criticisms are in order. Experience has taught me that individuals sometimes take exceptions to statements made, and a safe plan is to stick to facts, however subborn, and be sure authorities quoted are reliable. If by any means an individual is wronged unjustly in a communication, it is no disgrace to "come down like Crockett's coon," and make a satisfactory apology.

According to my observations the mercury sank to 20° above zero, the falling temperature of the day previous (Saturday, Jan. 9) caused the salt water to relinquish its heat, and the effect upon the fish was similar to a mixture of snow and salt to the hand. On the ocean beach but few fish were found except those usually found in shoal water. On the inside, or on the Hillsboro and Halifax rivers, also the Lagoon, the destruction was immense, especially among the trout. The fish were not frozen solid, as I do not remember of having seen any ice save in fresh water.

New Smyrna,⊙ Fla.

For the American Bee Journal.

Bee-Keeping in Mississippi.

20—L. J. DE SOBOTKER. (85-82.)

We had some pretty high winds and chilly weather during the past week, but it has not prevented the bees from brood-rearing in the least. They are very active and busy gathering pollen and nectar; some of the colonies in "gums" are throwing out natural swarms with beautiful queens. I have now 50 gallons of honey of 11¾ pounds each. In bloom we have at present white clover, wistaria-vine, grape-vine, and a very prominent and plentiful vine, called here the "poison oak," which resembles the Indian vine of the West Indies. It blooms profusely, and the bees go wild over it; the bloom resembles that of the grape. It has three large leaves on each stem, and the flower growing just where the stem of the leaves join the branches. They are small, bunchy, white flowers. I should like to find out the name of it. We also have mustard, white clover, some hawthorne, and a few scattering locusts. I am told that in the woods near here can be found nearly all the principal annuals, perennials, shrubs and trees that are mentioned in Prof. Cook's Manual as growing in the several months mentioned therein, in the South, with the exception of palmettos, sumacs, black mangrove and magnolias—these latter grow in the State, but farther south. Will some one please say why the bees visit constantly the kitchen refuse-barrel, also the cooking water, coffee grounds, and also the contents of the dry-earth closet, etc.? Can it be for the salt contained in these articles? Since I noticed this, I have been sprinkling salt on a board close to this place, and the bees go heartily for it.

Riverton,♀ Miss., May 22, 1886.

For the American Bee Journal.

Shooting into a Swarm of Bees.

G. P. HACHENBERG, M. D.

Sometime ago a fine, large swarm of bees rested on the top branch of a high live-oak tree in my apiary, beyond all ready means of securing it. On the principle that a swarm will not bear much disturbance while it is forming a cluster, I took a shot-gun, loaded with fine bird-shot, and deliberately fired into it. This brought at once to the ground some portion of the bees. As they were about fairly gathered again into a cluster, a servant emptied the contents of his gun into the swarm. The bees now took wing, and went with precipitation back to their hive. I then secured them by artificial means.

A few days later another swarm located about the same place. I fired one shot into it, and it took wing and settled in another tree close by, lodging again inaccessibly high. I renewed the firing into it, and the swarm again took wing as before and settled on another tree. The last settling of this swarm occurred within reach. I might now have secured it, but to complete the experiment, I repeated the firing. The swarm now took wing again, diffusing itself considerably over the apiary as if greatly bewildered, and finally returned to its hive, where I secured it.

If the shooting is done at a long range, which should always be the case, there will be less bees sacrificed, than may at times occur in the ordinary method of hiving them.

This heroic treatment will force the swarm to change its position, which is sometimes necessary to secure it, and tends to drive it back home. Of course there is risk of killing the queen by this operation; but should that occur, the loss would not be serious, as the bees are forced back to the hive, and there resume work as a powerful colony. A few days ago, a single shot into a swarm, that took its position on a high tree, brought it back to its hive. I left it there to await results.

This method of treating bees may meet with criticism, at least where shooting is not rife, as deprecatingly as it is said to be in Texas. Although I am not much inspired with sentiment for the bee, I would not kill one unnecessarily; indeed, I often pityingly help them out of the toils in liquid honey. But when they come into the way of a rational experiment, I fear I regard their lives but at their commercial value. I take pleasure in managing bees, as all their operations are exceedingly interesting, but that pleasure, too, savors much of the excitement of a war with an enemy that is vicious, treacherous and thievish in an extreme degree.

Austin,⊙ Texas.

For the American Bee Journal.

Are Bees Taxable Property?

J. E. POND, JR.

On page 309, Mr. T. B. Blair asks the above question. There is no question as to whether bees are property or not, and all will admit that they have a marketable value. With this admission is there any reason why they should not be taxed at their full value, the same as any other property? If the question had been asked, are bees taxed as property? I should say, as a rule they are not. This, however, is the fault of the assessors (and, as some might say, fortunately so); but to the abstract question of whether bees can be legally taxed, I say most emphatically *yes;* unless the statutes expressly provide to the contrary!

Custom is said to make law; this idea is only true in a measure, and cannot be made to apply to the question at issue. Some classes of property, for reasons of public policy, are exempted by statute from taxation; bees in my own State are not, although I do not know of a single instance where they have been made the subject of taxation. Probably bees will not be taxed in any State unless a "hue and cry" is made in regard to the matter, and my advice is, if you do not want to have the assessor ask you the value of your bees, to keep quiet and say nothing about it.

It is true that bees are uncertain property, but we pay taxes on our horses, cattle and sheep; four-legged chattels are as "unsartin" at times as are our winged pets, and there is no more reason in avoiding the tax on bees because they are liable to die out, than it would be to avoid the same on our farm stock for the same reason. To sum up, my opinion is that a tax can be legally assessed and collected on bees, at a fair valuation, the same as on any other class of personal property, unless an express statute exists, exempting them specially from such assessment.

Foxboro,○+ Mass.

For the American Bee Journal.

Northern Ohio Convention.

The Northern Ohio Bee-Keepers' Association held its convention in the Town Hall at Wellington, Ohio, on April 30, 1886, President Daniel White in the chair. The Secretary's report was read and accepted. The Treasurer's report showed a balance of $14.95. Seven dollars and seventy-five cents was allowed the Secretary for expenses.

The election of officers resulted as follows: Pesident, H. R. Boardman, East Townsend; Vice-President; C. McClave, New London; Secretary and Treasurer, H. W. Minns, New London.

The Secretary read a communication from Mrs. C. Robbins, of Indianapolis, Corresponding Secretary of the North American Bee-Keepers' Society.

The programme for the day was announced by the Secretary. The first was an essay by M. W. Shepherd, on "Spring Management." It was an able essay on this subject, advocating the feeding of maple sugar early, to stimulate breeding, and the use of division-boards to contract the space of the brood-chambers to correspond to the size of the colony. These were considered indispensable by all present. The convention then adjourned until 1 p.m.

AFTERNOON SESSION.

At the appointed time the President's gavel brought Mr. S. F. Newman to the front with his subject as per programme, viz: "Bee-keeping as a business." He described vividly the expectations and disappointments of bee-keeping, saying that thousands of dollars have been thrown away by beginners who are lured to the business by the glowing accounts of the bee literature of the present age; and although he had "great expectations" for the future, he could not be induced to engage in bee-keeping exclusively. Mr. Boardman had made it his entire business, and could say that it was his only source of income, and can attribute his success to untiring industry and close attention to details. Mr. Knapp had by figures proven his bees to be the best paying thing on his farm. But he would not like to mortgage the farm for more capital to invest in bees and fixtures.

The unanimous voice of the assemblage would advise a beginning with few colonies, and increase as experience and capital were obtained from the business. Mr. Smith asked if failure was a necessity, and was answered by Mr. Newman in the negative.

"Production of comb and extracted honey" was assigned to H. W. Minns, who has had success by placing empty sections below those that are nearly or quite finished. In case of swarming, he follows up the working bees with their unfinished work, putting combs into the brood-chambers of the new home.

Mr. S. F. Newman said that a brood-nest of the Simplicity hive was too large for comb honey. He would contract it by division-boards. He places a comb of sealed brood in the upper story to encourage the bees to go into the sections. He also said that their is more profit in extracted honey at 10 cents than comb honey at 15 cents per pound. Mr. White produces extracted honey almost exclusively. Mr. Boardman, who reports 550 colonies, has not used his extractor for years.

An essay on the "Best method of increase," was read by Daniel White. He had found that by the purchase of 3-frame nuclei in the spring of 1885, he could increase the number very rapidly. Such a method, however, did not at once increase his bank-account. The discussion presented many ways of increasing. Reports of wintering from those present showed a loss of 55 colonies out of 1,127.

The convention then adjourned to meet at the call of the Secretary, in October, at Norwalk, Ohio.

H. W. MINNS, *Sec.*

For the American Bee Journal.

My First Bee-Hunt.

J. H. ANDRE.

Many years ago my father was away from home in the fall of the year superintending a job of work, having left a younger brother and myself to finish up the late harvest and attend to the stock, etc. One day in the latter part of September, I ascertained that bees had been seen getting water at a creek about half a mile distant, and as it had been well known by many that an old resident bee-tree had been lined to the hills near this place, and none of the hunters had been lucky enough to secure the prize, I thought that I would try my boyish skill. I had accompanied other members of the family in their hunts, but had never gone alone.

After getting the work for the day done, and the necessary accoutrements ready, I set out one day at 2 p.m. I found the bees on the flowers, and caught some and put them to work on a piece of comb containing sugar syrup. Sure enough, when filled, and after much circling, they started up the mountain on the line of the famous old tree. A creek run at the foot of the mountain, but my boyish blood was up, and pulling off boots and socks I waded through and started along the line which ran diagonally up the mountain, which stood at an angle of not less than 55°. Tree after tree was eagerly scanned for one-third of a mile or so, when I came to a large pine stub that had been broken off by the wind some 30 feet or more from the ground. It proved to be hollow 15 feet from the ground, and a woodpecker had made an opening for a nest years before, which made an entrance for the bees, and the prize was mine.

On arriving at my home and telling my brothers of my success, all agreed that it was the tree of old, and were eager to see it downed. After dark several of the neighbors were invited, and we started off. By an oversight we had but one ax, and after a few blows the helve broke off close to the eye. Fortunately it was a single-blade, and a fire was built, the piece burned out, and the helve put in again, which took until late in the night.

The tree was felled and a slab cut out of the side, when it was found to contain comb 6 feet in length, and the diameter of the hollow was fully 18 inches. Every inch of space was filled, but as the comb was so old not one-half of it was filled with honey, and we secured only 130 pounds. The colony must have been at least ten years old. We could not carry the dry comb that evening, and it was piled up, and the tree being dry, it all took fire a few minutes after we left, and made a splendid bonfire.

Lockwood, ♀ N. Y.

For the American Bee Journal.

What to do with Weak Colonies.

4—GEO. F. ROBBINS, (60—58).

The recent reading of the answers to Query, No. 246, "When to unite weak colonies," and Mr. Doolittle's pamphlet detailing his method of management, have prompted me to write this article. Mr. Doolittle is about right in saying that when several colonies are united into one in early spring, that that one is very likely to die after all. I am not yet satisfied whether it is better to unite thus, or not, except when one colony is queenless; in that case, unite by all means.

But Mr. Doolittle agrees with a number of other answers to this query, that it is better to build up weak colonies. By analogy it would be better for me, if I owned one acre of land, to start a gold mine on that acre than to plant it in cabbages. I have found that many times it would be about as easy to do the latter as the former. Do what I may to build up, often while the weak colonies do not increase, the strong ones dwindle. Such has not been the case so much this spring. I have not endeavored to build up the few weak colonies I have, but I have not had a case of dwindling except in case of the loss of the queen. The reason is that the season, especially during April, has been favorable. To have a warm, sunshiny April is to have the best stimulating conditions possible. It is our cold, damp, cloudy, backward springs that do the mischief. Here in Central Illinois this kind of seasons largely preponderates of late years. During such seasons bees die off just about in proportion to the effort made to strengthen them.

Mr. Doolittle's method of building up colonies is essentially as follows: If a colony has two frames containing brood he inserts a frame of honey with the capping broken, in between them. At the end of about a week he inserts another frame in the brood-nest in like manner; in another week, another frame, and so on. At the end of three weeks the first frame of brood begins to hatch, and, according to my experience during our backward seasons, at this time those three frames of brood is about all you will have left. If there are plenty of stores in the hive, or coming in, the instinct of a good queen is to fill five or six frames with brood as rapidly as the bees are able to feed and protect it. I have had a queen to lay three eggs in a cell, confining herself to two frames, and all my efforts to build that colony up by inserting frames of hatching brood and of honey failed. The outside frames would be left empty as soon as the old brood hatched out.

I am aware that sometimes conditions that might have been remedied, helped to cause this failure, namely, a flat or shaded location. But other colonies well situated did not fare very much better. Now, what shall we do? If we can neither unite nor build up to advantage, what shall we do? To a large extent we can do nothing. I have about become convinced that all we can do during such vernal seasons as I have described, is to confine the bees to the number of frames they can cover well, see that they have plenty of good stores, pack them dry and warm, get them into a dry place in the sunshine, and leave them alone until settled warm weather.

Unfortunately such weather and white clover have been pretty much in the habit of coming on together, in this latitude, about June 1; but to us who run chiefly or only for honey, I think this is not necessarily so great a misfortune as it appears to be. Unless our winter losses have been very great, when we consider that hives and fixtures cost money, and that the honey-yield of any field is limited, very much increase is not profitable. With the swarming instincts that my bees have, I always have to do some uniting to avoid this over-increase of colonies. In doing this I have utilized such weak colonies more profitably than I could build them up. The first swarm that issues I hive on the old stand. The old hive I place down beside one of these weak colonies, and in the evening, or in a few days, I unite them, giving the extra frames to a colony not so weak, or putting them any place where I can use them to advantage. I have had colonies thus formed go to work in surplus boxes in three days thereafter, and cast a swarm in about two weeks.

Mechanicsburg, ⊙ Ills.

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

Local Convention Directory.

1886. *Time and place of Meeting.*

July 6.—Hill County, at Peoria, Tex.
H. A. Goodrich, Sec., Massey, Tex.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Good Prospects in Canada.—R. F. Holtermann, Brantford, Ont., on May 22, 1886, says :

Reports from various quarters state that there have been several natural swarms. Everywhere bees are in splendid condition. Prospects in Canada never were better for an abundant honey harvest.

Taxing Bees.—L. A. Dosch, Miamisburg,⊸ O., says :

I have always paid taxes on my bees. They are listed on the assessor's printed blanks the same as any other agricultural stock. The assessor asked me how many hives of bees I had ; I told him, and he put his own value on them at $3 each, without seeing them.

Excellent Spring for Bees.—H. L. Wells, Defiance,⊸ O., on May 24, 1886, writes :

I began the winter of 1885-86 with 53 colonies—47 on the summer stands, and 6 in the cellar. Those put into the cellar were very weak, and would not cover more than one frame, with the exception of one colony. I lost 3 outright, 3 became queenless, and I united them with others to save them. I sold 3, and I now have 44 splendid colonies, most of them occupying from 16 to 20 frames in both upper and lower stories. I am looking for swarms every day. I saw the first white clover bloom on May 15. Locust and raspberry are in full bloom, and white clover will be out in ten days more, I think. It has been the best spring I ever have known for bees. If the season continues as it has begun, I will get from 100 to 150 pounds per colony.

Heavy Yield Expected.—Reuben Havens, Onarga,⊶ Ills., on May 18, 1886, writes :

This has been the most favorable spring for bees within my recollection. There have been but very few days since the first fruit bloom that the bees have not been busy gathering either pollen or honey, and have built up very fast. I had a fine swarm on May 15, nearly a month earlier than usual. My hives are full of bees, and many of them with the bees clustering on the outside. White clover is commencing to blossom, and I see that the bees are already working on it. I think I never saw a finer growth of clover. If the weather continues as favorable as the past month, there will be a heavy yield of honey. There is not more than one-third as many bees here as there was two years ago, some having lost all they had. I know of but two or three persons that have as many colonies as they had two years since. There is but little of last year's crop of honey on hand in this part of the State.

Convention at Kiel, Wis. — Ferd Zastrow, Millhome,⊶ Wis., its Secretary, reports as follows :

The Wisconsin Lake Shore Center Bee-Keepers' Association met at Kiel, Wis., on May 20, 1886, with President E. Peterman in the chair. About 40 bee-keepers were present, and the list of members was increased by 12 new ones. The convention was an enthusiastic one, different essays were read and discussed, and listened to with great interest. Four hundred and eleven colonies were reported in good condition, mostly by farmers that keep from 2 to 20 colonies for home use. They were nearly all in favor of out-door wintering, the hives packed in chaff. The annual meeting will be held on Oct. 7, 1886, at 1 p.m., in Koehring's Hall, at Kiel, Wis.

Nothing for Bees to Gather.—G. M. Doolittle, Borodino,⊙ N. Y., on May 24, 1886, says :

I notice on page 307 that most of the bee-keepers of the United States are having a joyful time with bright prospects ahead. Well, I am glad of it, even if I am now compelled to feed my bees to keep them from eating and destroying their brood. Our spring was fine until fruit bloom, so that the bees reared lots of brood, and consumed most of their old honey, making them now strong in numbers. During fruit bloom it was cool, cloudy and rainy, so that the bees could not work ; now it is warm and fair, but there is nothing for them to get ; the result is as above.

Worth Ten Times its Cost.—E. Kretchmer, Coburg,♀ Iowa, writes :

I have had the pleasure of hastily examining Dr. Miller's new book, "A Year Among the Bees," and I find it brimful of practical directions for "making dollars out of bees." For years we have had Simplicity hives, and now we have "Simplicity Management" in Dr. Miller's book ; for from first to last he guards against all avoidable expenses, and works for the income of honey, which means money. Although an "old stager" among bees, I can find a great number of points that are worth to me more than ten times the cost of the book. I would advise all to obtain a copy, and I am confident that even the most experienced bee-keeper will find something in it worth more than the cost of the book, which is, in addition to its valuable contents, printed on good paper, in clear type, and excellently bound in cloth.

Good Increase.—Theo. Alexander, Bowling Green,⊸ O., on May 26, 1886, says :

I have 2 colonies that have cast 7 good swarms, the first came out on May 3, and the seventh on May 22. Who can show a larger increase ?

Cellar Wintering, etc.—J. Jardine, Ashland,⊶ Nebr., on May 24, 1886, writes :

I got over 3,000 pounds of honey last year, and it is all sold now. I could have sold much more if I had had it. It was all in one-pound sections, and all gathered from the heart's-ease. From Aug. 15 to Sept. 20 is our honey-flow in this part of the State. On Dec. 12, 1885, I put into winter quarters 105 colonies, keeping the temperature in the cellar at from 40° to 45° all winter. I took them out on April 9, and found 103 colonies strong in bees, and 2 of them queenless. They went to work in a few days after they were out, and to-day I had a fine swarm. The cellar wintering is good enough for me. I hope we will have a good year for honey. A few days since I got two fine Carniolan queens that were reared from imported stock. They are fine looking queens, and I introduced both nicely in 24 hours. I want the bee that produces the nicest white comb honey. I have tried the Italians, the Germans, the Albinos, etc. The Albino is a fine bee, a good worker, and very gentle ; but the Syrians are too cross for me, at times. I use mostly the 8-frame Simplicity hives, and like them very well, so far.

Feeding Plant-Louse Nectar.—L. Reed, Orono,⊙ Mich., on May 24, 1886, writes :

My winter loss was 20 per cent. previous to April 12, when I put them out to stay, and they were in splendid condition, hives full of bees, and they seemed to be doing finely. They worked very strong on willow and soft maple, and the prospect never was better for the time of year. On May 7, upon going into the bee-yard, I noticed bees on the outside of several hives, and the ground literally covered with bees crawling in every direction. They could not fly, and seemed to be crippled. They were mostly young bees. My first thought was that they were starving, but on examination I found that they had plenty of honey. There is only one way that I can account for it. About two weeks before I had put into each of 10 hives one frame of plant-louse nectar all capped over, about 6 pounds to the frame. This honey I got of my son whose bees all died. I had about 80 pounds of it, and I supposed that it would be safe to feed bees when they could fly every day. These 10 colonies were affected the worst. The rest of the honey I had at the same time I put out, so that they all helped themselves. A few colonies died with brood in the combs. They are over it now, but two-thirds of them are very weak, and one-third of them that were not affected are strong, and will be ready for the raspberry which will be in bloom in about a week. Some of my neighbors think that the bees were poisoned, but I cannot think so. Will some of the prominent bee-keepers give their opinion about this case? I picked up some of the bees and put them back into the hive, but they ran out as quickly as possible. It was a sad sight for me. I never have seen anything like it, and I hope never to see the like again.

Storing Honey Finely.—G. W. Rankins, Weston,⊶ Ky., on May 21, 1886, says:

Bees are storing honey finely now. I wintered my bees on the summer stands; put away 10 colonies, and had 9 this spring. I lost one by starvation. I have had 2 nice swarms, one on May 13, and the other on May 14. I think that we will have a good honey harvest this year.

Bees Taxable in Indiana.—D. C. Noble, Larwill,♂ Ind., says:

On page 309, Mr. T. B. Blair asks, "Are bees taxable property?" In this State bees are taxable property, valued at one or two dollars per colony. They are assessed on April 1 of each year. We also pay one dollar per head on dogs.

Frost, Feeding Bees, etc.—Fred F. Rockwell, Leonard,♂ Texas, on May 21, 1886, writes:

On March 28 we had a heavy frost, followed by cold rains, which was followed by a storm that destroyed all blooms on plum, red-bud and haw, that the frost had not killed; and also attacked the elms, so that they looked as though a fire had run through them. I at this time was away on the farm and did not notice the bees for a week or so, and in fact I rather looked for swarms. Easter Sunday I noticed my "first swarm" hanging on a peach-tree. I hived them, and about 3 p.m. they came out of the new hive and settled on another hive containing Italian bees. I then gave them two combs of brood and bees from a strong Italian colony, and changed their stands, and they remained all right, and went to work. A few bees were flying around a hive that had a strong colony, which attracted my attention, and on opening it I found eggs, unsealed and sealed brood, but no honey and *no bees*. So the "first swarm" undoubtedly came from this hive, having deserted it. On Monday morning I looked over the entire yard, and found the bees actually starving and dying in April—in Texas. All drones had been killed, and my only fair colonies were the ones that were comparatively poor before. Will some one advise me of the best way to feed bees under such circumstances, so as to build them up the most rapidly? We have had a splendid flow of rattan honey, and the colonies that are strong are doing rapid work, and are storing surplus honey. It seems strange though not to see a drone or to have had a prime swarm yet. It is my first experience of the kind. I hope to have my bees in good condition for the horse-mint, should that plant yield any honey.

Bees Heads and Honey-Cells.—R. Woodward, of Cheltenham, England, writes:

I have lately discovered a curious connection between the head of the worker bee and the honey-cell, which may perhaps throw some light upon comb-building. Suppose a worker bee's head is severed from its body and laid flat on a sheet of paper, the angle which would be represented, if lines were drawn on the paper along and beyond the side of its head, would, by careful measurement, be found to contain 60°. Now, as the angle formed in the honey-cells contains 120°, it will be seen that this angle is just double the size of the one formed by the bee's head, or if we place *two bees' heads* side by side, we shall then obtain the exact angle of the honey-cell or hexagon, namely, an angle equal to 120°. This is surely a singular coincidence, as the worker bee, apart from instinct and reason, seems to contain *in the shape of its head* an angle-setting-out instrument suitable to the construction of the cells that it has to build.

"Balling" Queens, etc.—W. S. Douglass, Lexington,⊙ Tex., on May 12, 1886, writes:

A great many bee-keepers think that when they see bees "balling" their queen that they intend to kill her. This, however, is not always the case. Bees often "ball" their queen to protect her. I had a second swarm the other day, and I made them very wet; I then shook them into a tin pan and then poured them on an old door laid down flat. I saw that they had two queens. By that time a swarm came out of another hive and commenced to settle with this swarm on the door, the bees of which were so wet that they could not fly. As soon as they commenced settling with the swarm on the door, I watched them. Of course I could not have known them apart if they had not been wet. I saw them make for their queens, and I thought that they intended to kill them. On each queen there was a lump of bees as large as a hen's egg. I then began to rake them off, and was surprised to find that not a single bee was trying to bite or sting their queen. They were protecting them from the other bees. The same is true when a colony of bees are being robbed. As soon as the robbed colony finds that they are being robbed, and robbers are inside of the hive, they at once cover their queen for protection, and if the robbing is not stopped in a day or two the queen will surely die; for they will stick to her till the robbers leave. The queen either dies from fear or smothers; I have not been able to discover which. Bees are working on the persimmon now. The horse-mint is commencing to bloom, and the hives are overflowing with worker bees. Some of my hives I believe have a half bushel of bees hanging on the outside. I expect many swarms during horse-mint bloom.

Working on Locust, etc.—T. F. Kinsell, Shiloh,♂ O., on May 25, 1886, writes:

Colonies are very strong, and are working now on locust and raspberry. White clover is just commencing to bloom. Without a drouth or excessive rains, we have no break in honey-flows, up to the close of white clover bloom, and the season so far has been much better than the average. Last year was not a good one for bees, and the winter losses previous to that season, left bee-keepers pretty blue.

Preventing Increase.—Mr. H. M. Parker, Plymouth,♂ O., on May 25, 1886, writes:

Can I keep the bees from increasing by managing them in this way? After the swarm issues, put all the frames containing brood in the lower story, and filling it (the lower story) out with frames of foundation; then put the frames containing honey in the upper story, filling out with frames of foundation; then run in the swarm or put on the top story, after hiving the swarm. I could place a frame of foundation between the frames of brood to change the interior of the hive so that the bees would hardly know it was their old hive. When the upper story is filled with honey, I can extract it. I have never read or heard of this way; will it work?

[Yes, if you cut out the queen-cells, you will prevent immediate increase, and in the interim other conditions may surround that will prevent their swarming for the season—perhaps a copious honey-flow. But why do you use a brood-chamber so large that only part of the combs are filled with brood? Is this economy? Again, I do not want combs built, or drawn, between completed combs. Such are apt to be made unnaturally thin. In my locality, colonies treated as you describe are almost sure to repeat swarming within 10 to 15 days. Besides this, your plan has proven by repeated tests to be too laborious for practical adoption in large apiaries. We want, and I think we will get, something better and easier.—JAMES HEDDON.]

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

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The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 31, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb is coming forward more freely and prices now are 15@16c. for 1-lb. sections. Extracted is in light demand at 5@7c. California comb honey, in 2lb. sections, 9@12c.

BEESWAX.—23@24c. per lb. Not much offered.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The first new comb honey of the season—a sample lot of extra choice—brought 14 cts. We quote: White to extra white comb, 11@14 cts.; amber, 7@10c. Extracted, white liquid, 4½@5c.; light amber colored, 4 to 4½c.; dark amber colored, 3½ to 3¾ cts.

BEESWAX.—Quotable at 20 to 24 cts.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½.

BEESWAX.—Firm at 22c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—There is an excellent demand for best 1-lb. sections of white honey, and all arrivals sell readily at 14c.; 2-lbs. and glassed sections sell slowly at 12c. Extracted, 7@8c.

BEESWAX.—Scarce at 25@28c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market seems quite dull for all qualities of comb honey, with but a moderate demand for extracted. We quote: Choice, white 1-lb. sections, 17@18c.; the same in 2-lbs., 16@17c.; dark 2-lbs., 15@16c. Extracted, white, in barrels or kegs, 7@8c.; dark, in same packages, 6@7½c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

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To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. 1, bound in cloth, $2.50, postpaid.

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To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

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We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Advertisements.

ITALIAN, Holy-Land and Syrian Queens. Circular.—**N. E. COTTRELL**, Burdick, Ind.
22A1t

FOR SALE.—Best Brood Foundation at 40 cts.; Light, 50 cts. Samples free. Also Sections, Smokers, etc.—GUST. PROCHNOW,
19A4t Mayville, Dodge County, Wis.

NOW READY TO SHIP—Untested Italian Queens at **$1.00** each. Send for Catalogue. **MARTIN & MACY,**
20E4t N. MANCHESTER, IND.

NEW ONE-POUND HONEY PAIL.

THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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20A3t **E. A. GASTMAN, Decatur, Ills.**

Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,
DR. C. C. MILLER,
20Atf MARENGO, ILLS.

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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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SECTIONS.

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One-Pound Sections, In lots of 500 to 3,000, ℔ 1,000, **$4.00**

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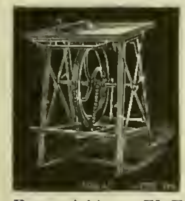

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
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Having a large stock of sections on hand we will furnish them in crates of 500 each, (less than 500, ¾ ct. each), size, 4¼x4¼x1⅞

4¼x4¼x1⅞	$2 50
From 1,000 to 5,000—per thousand	4 50
" 5,000 to 10,000— "	4 25
" 10,000 and upwards "	4 00

4½x4½, at same prices. All V-grooved.

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices.

For description and prices of the **SUCCESS HIVE**, send for Price-List. Estimates given on all other Hives.

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Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
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2C6t **A. J. NORRIS, Cedar Falls, Iowa.**

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Brood Foundation,	1 to 10 lbs., per lb.	45c
" "	11 to 25 lbs., "	43c
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" "	100 lbs., "	40c

Thin, for sections, 10 cts. per lb. extra.

Queens—Extra Tested, each	$3 00
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40c per lb. for heavy.
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I **WILL** furnish **Warranted Italian Queen-Bees** for $1.00 each ; Tested Queens for $2.00 each. Delivered by mail.

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Extra Selected Tested Queens, producing very gentle and beautiful workers, **$2.00** each.
Warranted Queens **$1.00** each. Don't fail to read my offer to replace all Warranted Queens that prove impure.
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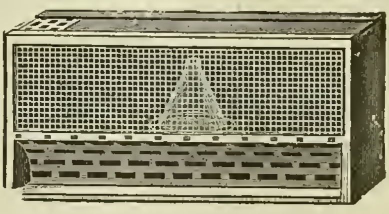

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200 Colonies Italian & Hybrid Bees

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WARRANTED	Queens,	by mail	....	$1 00
"	"	"	per ½ Doz...	5 00
SELECT	"	"	each	1 25
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9W1y **J. M. JENKINS, Wetumpka, Ala.**

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A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

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SECTIONS.

Down, Down, Goes the Price!

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G. B. LEWIS & CO.,
WATERTOWN, WIS.
April 15, 1886. 16Wtf

40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. **Circular Free. T. L. VonDorn,** *Omaha, Neb.* **None Better**

12Atf

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf **J. VANDERVORT, Laceyville, Pa.**

Bee-Keepers' Supplies,

OF ALL KINDS,

Sections & Comb Foundation

A SPECIALTY.

125 colonies of Bees for sale

in Quinby frames, mostly Italians.

☞ These Bees will be SOLD CHEAP. Send for prices. Also, for Illustrated Price-List.

☞ **W. E. CLARK,** successor to L. C. Root,
11A13t ORISKANY, Oneida County, N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DO YOU EAT CANDY?

SEND $1.25 and I will express 5 lb. Todd's Honey Candies, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's New Book mailed free for $2.50. **ARTHUR TODD,**
1910 Germantown Ave., PHILADELPHIA, PA.
17A10t

TWO-POUND
SECTIONS.

Job Lot—Cheap!

WE have on hand a Job Lot of **25,000** One-Piece Sections with square groove, which we will close out at **$3.50** per 1,000, or $2.00 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

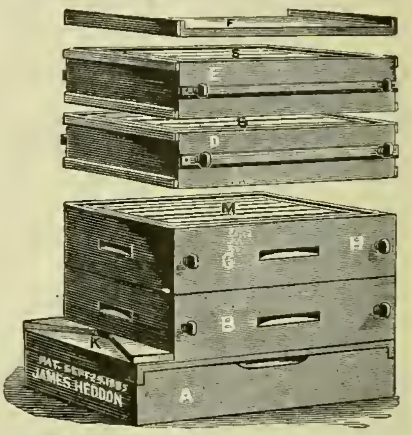
THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

ITALIAN Queens, by return mail. Tested, $1.00; Untested, 75 cts. By permission, I refer to Mr. I. R. Good, Nappanee, Ind.

22A3t **Geo. Stuckman, Nappanee, Ind.**

The NEW Heddon Hive.

We have made arrangements with the Inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives, 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison-St., CHICAGO, ILL.

Doolittle's Queens.

For Prices, &c., see page 221.

17Atf

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. June 9, 1886. No. 23.

There 's Always a river to cross,
  Always an effort to make,
If there 's anything good to win,
  Any rich prize to take.

The rougher the way that we take,
  The stouter the heart and the nerve ;
The stones in our path we break,
  But ne'er from our impulse swerve ;

For the glory we hope to win,
  Our labors we count no loss ;
Never pause and murmur because
  Of the river we have to cross.

◆

Tycard Sons, Pittsburg, Pa., have sent us their price list of Glass Honey Jars.

◆

The Cincinnati Exposition opens on Sept. 1 and closes on Oct. 9, 1886. This is the thirteenth annual exhibition. Full particulars may be obtained of L. H. McCammon, the Secretary, at Cincinnati, Ohio.

◆

A Queen-Introducing Cage, from Peter Brickey, Lawrenceburg, Ky., is on our desk, and as requested is placed in our Museum. It is similar to the one illustrated in "Alley's Bee-Keepers' Handy-Book," on page 204.

◆

The Basilian Friars, of Northern Greece, for a breach of one of their rules, sentence the offender to a week's "Lenten fare," consisting of "milk, barley-bread and honey"—not a very disagreeable sentence we should imagine.

◆

We have Received from the publisher, Mr. A. I. Root, Medina, Ohio, T. B. Terry's new book on "The Winter Care of Horses and Cattle," considered from a humane point of view, as well as from a dollars-and-cents view, and a consideration of the relation one bears to the other. Price 40 cents. It contains 50 large pages, and points out with certainty and in detail the most humane and profitable treatment for horses and cattle. It can be obtained of the publisher or at this office.

Bee-Suit in California.—On page 358 the statement is made that this suit has again been lost. Mr. Bohn has asked for a new trial, claiming that the jury were instructed erroneously by the court on the meaning of the words "willful" and "negligence." That our readers may see what these instructions were, we copy some of them as follows :

> The word willfully, when applied to the intent with which an act is done or omitted, applies simply a purpose or willingness to commit the act or make the omission referred to. It does not require any intent to violate law or to injure another or to acquire any advantage.
>
> The word negligence imports a want of such attention to the nature or probable consequences of the act or omission as a prudent man ordinarily bestows in acting in his own concerns.
>
> It is negligence in the owner of bees to keep them in such a manner that they trespass upon and injure the property of another.
>
> It is a well established rule of law that every person must so use and control his own property as not to injure the property of any other person.
>
> If you find from the evidence that the defendant's bees did injure the plaintiff's grapes either while said grapes were on the vines or while they were drying on trays, then defendant is responsible to plaintiffs for such injury, and it is for you to determine from the evidence in the case the amount of money that will compensate plaintiffs for such injury.
>
> Although a person can only have a qualified property in bees, the person having them in his possession is liable for any injury they may do to the property of another person : and they are in the possession and under the control of the owner of the hive as long as they continue to use the hive as their home. The owner of the hive does not cease to be the owner of or lose his control of the bees simply because they are off of the owner's premises gathering honey or pollen to store in the hive in accordance with the usual habits of the bees. It is only when the bees leave the hive, escape from the owner of the hive and their identity is lost, that the owner of the hive ceases to be their owner.
>
> Trespass is any misfeasance or act of one man whereby another is injuriously treated and damnified either in his person or property, and the term any misfeasance signifies the doing of a wrongful act or the improper performance of a lawful act, and the Court instructs you that the bee-keeping and culture of bees in apiaries is a lawful occupation.

◆

National Bee-Keepers' Union.—On page 357 will be noticed a portion of the First Annual Report of the Manager of the National Bee-Keepers' Union, which is now being sent to all the members, with a blank voting paper to be used in voting for officers for the ensuing year ; together with a call for dues (25 cents) and one assessment ($1) for the year commencing on July 1, 1886.

In order to explain and answer some inquiries we will add that the Union is a voluntary affair. To remain a member requires 25 cents a year annual dues, besides the assessments called for. If the assessments or dues are not paid within the specified time — membership ceases ; all claims against former members are lost, and all claims to the protection of the Union are dissolved. It is not intended to have more than one assessment a year, unless some urgent case should make it necessary, and then there are but few who would not cheerfully respond to a call for an extra dollar.

The California Honey Crop for the present year gives promise of being large and of excellent quality. A trade circular from San Francisco remarks thus :

> The promised abundance of honey this season, the liberal supply now in foreign markets, and the extreme cheapness of almost every article of consumption, especially of sugars, syrups and the like, which come into competition with honey, make it altogether improbable that anything approaching fancy values will be realized, although for superior qualities comparatively good figures may be obtained, provided we are favored with free foreign orders. The first new comb of the season, a sample lot of extra choice, brought 14 cents.

The California *Grocer* says that the crop of 1885 was about 1,250,000 pounds. The foreign export from San Francisco during the year was approximately 8,800 cases. The shipments East by rail were 360,000 pounds from San Francisco, and 910,000 pounds from Los Angeles, including both comb and extracted. We notice that another California paper estimates the crop of 1885 at 2,000,000 pounds, and the crop of the United States for 1885 was put down at 26,000,000 pounds. We do not think these figures are quite large enough, though it was an exceedingly poor crop.

◆

Barrels for extracted honey is an important item. Much good honey is ruined by being put into old molasses and whisky barrels. Some very foolish persons have used old kerosene barrels for extracted honey. One case of the latter came under our notice only a short time ago ; and of necessity the honey was entirely spoiled. It is a mistake to use very large barrels ; they are so troublesome to handle, and generally hold too much honey to be easily sold.

The best packages are soft-wood kegs made of "Norway pine." They are convenient to handle, and are well suited to cater to the popular demand for honey in small packages. When compared with large barrels holding from 300 to 500 pounds each, they are fully as cheap and often cheaper. They need no waxing, but should be thoroughly scalded with boiling water before used, but not "soaked." Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these kegs can be handled and shipped, with an actual saving in original cost, it is apparent that they are the best. Often a five or ten gallon keg of honey can be sold where a barrel might go begging for a customer.

◆

Adulteration a Crime.—The Monetary *Times* of Toronto, contains this item : "Vermont has passed a law making the adulteration of maple sugar or honey with any substance whatever, punishable by a fine of from $25 to $50." Do any of our Vermont subscribers know of the passage of such a law ? We hope that if such a law exists, that it will be rigidly enforced.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Shading Hives—Division-Boards.

Query, No. 261.—1. What is the best way to make both artificial and natural shade for hives with thin walls? 2. How is the best kind of a division-board made?—E. B.

1. We shade our hives under trees and cover them with a rough board roof. 2. Our division-board is a ⅞-inch board with oil-cloth rounded over the ends to make a tight fit and loosen easily.—DADANT & SON.

1. Artificial shade is all that is used in my apiary. A shade-board made of any cheap lumber or shingles suits me best.—G. W. DEMAREE.

1. For artificial, use a thin board; for natural, use grape-vines. 2. I use an inch board the size of the inside of the hive below the rabbet, tacking on the top-bar of a frame for it to hang by. To make it fit tightly and still not swell tight in wet weather, tack strips from old rubber boot-legs to the sides and bottom.—G. M. DOOLITTLE.

1. I prefer a light board 2x3 feet held in place by a weight. I have used sun-flowers to good advantage. 2. It is made by the bees, and is a good worker comb. If it is not tight fitting, and you wish it to be so, tack strips of cloth to its edges.—W. Z. HUTCHINSON.

1. Grape-vines or trees, for natural shade, being sure of good circulation of air; that is, not having so dense a shade near the ground as to stop circulation. For artificial shade, boards projecting on the south side over the hive with an air-space under, or a bunch of tall grass or hay laid on top with a stick of fire-wood for ballast. Do you think that thin walls are as good as inch walls? 2. I have never seen a division-board that fully suited me. I am using a plain pine board ⅜-inch thick, but it is not possible to make a close enough fit without making it too hard to move.—C. C. MILLER.

1. Trees are the best natural shade. In using such the "bees wont go to Mahomet," so you must carry them to the trees. For artificial shade I have found nothing better than a flat board laid on top of the hives, and large enough for the purpose, "*a la* Heddon." A little ingenuity and a wide board or a piece of old sail-cloth or burlap will make all the shade required. 2. A piece of ¾-inch deal, the size of the frame, with the top-bar nailed on, makes as good a division-board as anything.—J. E. POND, JR.

1. The best shade is a wide shade-board raised by cross-pieces so as to rest about 4 or 6 inches above the hives. If we are afraid of wind, we can arrange to place bricks on the under side, which will weight the boards and yet not show. I use cross-boards 4 inches wide and connect these by a third board so nailed as to hold one or two bricks.—A. J. COOK.

What the best way is I do not know, but I can give you my way. My hives are among grape-vines on all sides. I also use a board larger than the top of the hive, letting it project on the south and west sides. 2. I use division-boards that just fit the inside of the hive, made of ¾-inch lumber; also ¼-inch lumber, but I see no difference. Nail it on a top-bar of a frame, and let it hang on the metal strip that holds the frames. In winter I use a division-board for small colonies 2 inches thick, packed with chaff.—H. D. CUTTING.

1. Where hives cannot be protected by the shade of trees or vines, a large shade-board is a good thing. 2. To make a serviceable division-board, cut a board 2 inches shorter than the hive is inside, and nail cleats on the ends.—G. L. TINKER.

1. ALL should be shaded, and when so, the thin-walled hives are coolest. Let natural shade go, and shade your hives with a board, or combination of boards measuring 2x3 feet. 2. We need no division-boards, I think.—JAMES HEDDON.

Pure Queens—Mating of Queens.

Query, No. 262.—1. Would an Italian queen reared from the egg, by a black colony of bees, be as pure as one reared by an Italian colony? 2. Is a queen reluctant to mate with a drone from the same hive that she herself is from?—J. M. C.

1. Yes.—H. D. CUTTING.

1. I think so. 2. This can only be guessed at.—G. M. DOOLITTLE.

1. I think so assuredly. 2. No one knows, but from analogy I should say no.—A. J. COOK.

1. Yes. 2. I do not think that a queen could tell from what hive a drone came; if she could, I doubt her having any objections to one from the same hive as herself.—W. Z. HUTCHINSON.

1. Yes, of course. 2. We think not.—DADANT & SON.

1. Yes. 2. Yes, exceedingly so. The queen's disposition to mate with a drone of a foreign scent is so great that I have found it very difficult to get them to unite with such drones though not at all related.—G. L. TINKER.

1. I think they would. I do not think that the nursing bees exercise any influence as to the purity of blood, by merely nursing the young queens. I have had large experience in this matter, and I am quite convinced that neither the worker nor royal progeny of one race of bees is affected in the least by being nursed and fed by another race.—G. W. DEMAREE.

1. There is no reason either in theory, or practical facts, that would tend to show that she is not. I should consider her progeny pure if she was purely mated. 2. No one can tell. I do not think that any difference will be discovered, however.—J. E. POND, JR.

1. Just as surely as a child of yours tended by a black nurse-girl would grow up a white child. 2. At a guess I should say she would hardly recognize the difference, but it is quite possible she might.—C. C. MILLER.

Straining and Purifying Wax.

Query, No. 263.—What is the best and quickest way of straining and purifying wax? I am experimenting with some of my bees, to secure the greatest yield of wax and less of honey. Out of a hundred hives I get a good deal of wax, as I remove it freely; but I do not like the looks of it after it is strained. I am at a loss to know how to get rid of the sub-strata of impurities after it is strained and cooled.—Austin, Tex.

The sun wax-extractor promises to be the best for extracting wax. By its use there is no substrata of impurities to get rid of.—G. L. TINKER.

I have no trouble in obtaining nice wax with any of our modern tin wax-extractors.—H. D. CUTTING.

After all that has been said about improved wax-extractors, I have the best success with a large kettle and bags of thin burlap. To purify the wax frequent melting in plenty of hot water gives me the best results. Hot wax should never come in contact with cold water.—G. W. DEMAREE.

Melt it over a great deal of water, and do not boil too highly. Let it cool slowly, and strain over a sieve if you choose.—DADANT & SON.

To every 10 pounds of wax add 1 quart of water and 1 pint of good vinegar. When all is melted, strain and put it in a warm place so that it will cool slowly. When cold, scrape the dirt from the bottom where it will be found all together, leaving the wax clean and nice.—G. M. DOOLITTLE.

I know of no better way than to allow the wax to cool in deep tin-cans surrounded by sawdust, or some non-conductor of heat. As the wax cools very slowly the impurities settle to the bottom. The cans should be smaller at the bottom than at the top.—W. Z. HUTCHINSON.

Melt a large quantity together, having it deep rather than shallow; let it cool *very* slowly, and you will succeed in scraping off all impurities from the bottom.—C. C. MILLER.

Melt it in water, and continue the melting process till it becomes clear. When cold, after first melting, most of the sediment will be found at the bottom of the cake. Shave this sediment off, and melt it over again; shave off the sediment and so continue till all is clear. Two or three meltings at the most has been found sufficient with myself, even when exceedingly dirty combs are used.—J. E. POND, JR.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⸌○ northwest: ○⸍ southeast; and ϙ southwest of the center of the State mentioned.

For the American Bee Journal.

Constructing Bee-Hives.

C. W. DAYTON.

There are many different arrangements for joining the covers and upper apartments to the brood-chamber, of which the mitre, rabbet and telescope joints comprise the greater number. There seems to be an idea with some that a hive-cover cannot be perfect without some sort of a rim attached, whether the rim is 2 inches wide to serve the purpose, or 8 inches wide to cover a case of sections. These joints are calculated to keep out cold and water. There is nothing better than a quilt spread over the hive held in place by a straight board carrying a small sized stone. That arrangement forms the closest fitting of all the joints, I believe.

As surplus stories are adjusted after the cold of the spring, and before it begins in the fall, a cold-excluding joint is as useless for its intention, as it is restrictive of needful circulation in mid-summer. There is nothing to go in at the joint but a driven rain, and that would not get on the combs, but would run down on the inside of the hive; and bees that are loitering their time away on the side of the hive ought to get wet.

Though water would not be very objectionable, I believe that it is usually the case that driven rain could not enter a joint between two parts of a hive, because of the wax and propolis deposited there; as I have known on several occasions four-story hives being tipped over, and remained unseparated and were righted by lifting by the topmost part.

Since using these arrangments side by side for the purpose of testing them, I greatly favor putting one hive on another as though they were ordinary boxes. In the construction of hives of this kind it requires not much more than one-half of the labor and three-fourths of the expense of the other kind of hives, and this in producing honey at 5 cents per pound, as we may have to do in a few years, will be quite a saving. Since beginning apiculture, and not being satisfied to follow exactly in the footprints of others, it has been a continued change from one arrangement to another, so that years of study and experiment have led me to adopt the above cheap, practical and efficient arrangement.

While a plain cleated board does well for a cover, the one I like best is a ⅞-inch cleated board, ¼ inch each way larger than the hive, containing in its upper side, to prevent warping, saw cuts 4 inches apart, running with the grain and ½-inch in depth. Then it is covered with tin extending down on the sides ½ of an inch below the edge of the board. The tin should be cut and soldered at the corners, so as to fit closely, a tin handle soldered to the centre of the top, and a coat of paint makes it complete. In this I find a cover that is cheap in the end, is not disturbed by wind, never leaks, and in connection with a quilt laid over the brood-nest, makes a very heat-confining joint.

Bradford, ♂ Iowa.

Country Gentleman.

The Ventilation of Hives.

L. C. ROOT.

In my own locality (Central New York) the period is so short during which we must secure our surplus honey, that we must manage our bees on the non-swarming plan; and every bee-keeper is aware that to control swarming, care must be exercised in shading and ventilating the hives. In any section where it is found difficult to prevent swarming, a properly arranged ventilator in the bottom of the hive is very essential. In fact, I might say that I consider a ventilator desirable in any hive, whatever the location. I find that where hives are placed on pieces of 4x4 scantling, they are so near the ground that the air which enters the hive under the bottom-board is sensibly cooled, and thus aids in lowering the temperature within.

For many reasons I would have the ventilation ample. To meet all requirements, an opening 10x12 inches in the bottom-board would be found none too large. At each side of this opening nail a cleat with one corner rabbeted out, to receive a slide by which the ventilation can be regulated.

In some of my hives, in which I do not winter bees, I nail a piece of wire-cloth on the upper side of the opening, to prevent the bees from coming out when the slide is drawn; but for various reasons, I prefer to have the wire-cloth on an extra slide, and nail the wire-cloth on the under side of it. In this way, you will be able to close the opening entirely, when necessary; or to admit the air and confine the bees, as required in moving bees; the wire-screen may be slid in place, or both may be left out, if desired. In constructing this ventilator, all work should be thoroughly done, so that when closed it will be perfectly tight, and at the same time, the slides work well.

According to my experience, bees seem to winter better when there is an opening directly under the cluster. They seem more certain of their freedom, and as the dead bees fall, they will drop out of the hive. When only the entrance is left open, it often becomes clogged. To secure the conditions which I suggest, some bee-keepers remove the hives from the bottom-boards, and set them directly upon pieces of scantling. I prefer the ventilator, as it saves labor, and is more agreeable when carrying the hives to and from their winter quarters.

I am not advising this ventilator for such as will not avail themselves of its benefits in the management of their bees. There are those who think that when they purchase a movable-comb hive, Italian bees, a smoker, and other fixtures, they have insured success, and have no part to perform in the matter themselves. A box-hive with a piece of bark for a roof, is all that will be of value to such, until they learn that these appliances are only valuable, as far as they can take advantage of them, in a more intelligent management of their bees.

During an extended practical experience, I have tested the worth of a good system of ventilation, and have proved it to be indispensable. If on some warm day during the best honey-flow, any observing bee-keeper will test this matter by opening the ventilator in one hive, and leaving it closed in the one next to it, he will soon be convinced of its necessity. If during such honey-flow, bees are seen idly clustering upon the front of the hive, it is conclusive evidence that they either lack room for storing their honey, or the hive is not properly ventilated. For warmer climates, it seems to me that ample ventilation must be an absolute necessity.

Mohawk, ♂ N. Y.

The National Bee-Keepers' Union.

The following is a selection from the report of the General Manager for the past year:

The past year has been an eventful one for the "National Bee-Keepers' Union," which was organized one year ago, and charged with the duty of "protecting the interests of bee-keepers," by "defending their rights" under the laws of the different States where they reside.

Besides giving the moral encouragement to the pursuit of bee-keeping which such a National organization naturally bestows, it has materially assisted in several cases where the law was invoked to crush the interests of our industry.

In June of last year Mr. Freeborn, an extensive apiarist of Wisconsin, was sued by a neighbor who kept a flock of sheep, and imagined that the sheep were deprived of their pasturage by Mr. Freeborn's bees, and otherwise annoyed by them.

It was understood that this was to be a "test case," and if the plaintiff succeeded in obtaining a verdict in his favor, either by the ignorance or prejudice of a jury, other bee-keepers would be likely to be sued to recover damages done to pastures, vineyards, and gardens by bees; and any one owning a few square rods of land, devoted to almost any purpose, may try to recover damages from all the owners of bees in the vicinity.

As soon as this Union was formed, I made the necessary preparations to defend this sheep-bees case. Among other things I wrote to Messrs. Demaree and Pond, as both were lawyers as well as bee-keepers, to know upon what terms they would undertake the defense of the case. Mr. Demaree responded that it would be difficult for him to leave his home at the time mentioned, but if it was deemed essential, he would do so; but suggested that the case might be studied by Mr. Pond and others, and "points of law" might be written out for use by the local attorneys, and it would be less expensive and do just as well as to take the more expensive method.

Mr. Pond replied that if it was deemed necessary he would go to Wisconsin and conduct the case, but that he did not think the Union could afford to employ him, and pay the necessary traveling expenses. He said that he could not afford to do it for less than "day-pay" for the time occupied in coming and going, etc.

After consulting with the Executive Committee, I concluded to employ local attorneys, and have Messrs. Demaree and Pond review the case, examine the authorities, and write out "points of law" for use at the trial.

This arrangement was made, and the "briefs" were prepared and sent to me; several other lawyers also prepared "briefs" and presented them to the Union. These were all sent to the local attorneys for use at the trial.

I paid $50 each to the two local attorneys, $25 to Mr. Pond, and $6 for court fees. Mr. Demaree generously donated his "brief" to the "Union Defense Fund."

The Judge made a thorough examination of the laws of the State, and concluded that their existed no laws or rulings upon which he could instruct the jury; and thus ended that case.

The Union made such a stir in the matter, showing such fighting enthusiasm among bee-keepers, that there would have been a *lively time* had there been a trial on the merits of the case.

In California, a suit has been tried in a Justice's Court against Mr. Bohn, for alleged damage done to grapes by his bees. This suit was lost in the lower court, because witnesses were obtained who testified that they had seen the perforation and destruction of the grapes done by Mr. Bohn's bees. In vain did the defendant's attorneys prove by a score of witnesses that the bee's tongue could only be used to extract sweets from the flowers—not to bore after them. The evidence of the eye-witnesses of the plaintiff had weight with the jury, and they accordingly returned a verdict against the defendant for $75 and costs of suit, which amount to over $60. The damages claimed were $299.

The National Bee-Keepers' Union advised Mr. Bohn to appeal from the decision of the Justice's Court, and assured him that the Union would stand by him, and aid in the appeal by sending money, obtaining legal advice, depositions from scientific experts as to the incapability of bees to puncture grapes, etc. The appeal was taken and again lost. The representative of the Union in San Bernardino wrote as follows concerning this trial:

"The case occupied the Superior Court for five days, there being about twenty witnesses on both sides. The jury retired on the evening of the fifth day, and on the morning of the sixth brought in a verdict in favor of the plaintiff for the sum of $25 and costs of suit. A very strong defense was made, and had it not been for what we claim a *mis*-instruction of the court, we would have won the case. The jury asked to be instructed by the court the meaning of the words "willful" and "negligence," and in defining the latter is where the error, we claim, was committed, taking the facts from the province of the jury. Mr. Bohn has asked for a new trial."

As Manager I have been appealed to for advice and encouragement in settling disputes relative to the interests of bee-keepers, and their rights under existing law, and I have cheerfully given the necessary time and attention to these cases, and obtained legal advice in order to "defend *the rights* of bee-keepers" against jealous or envious neighbors.

In January, as Manager of the National Bee-Keepers' Union, I served a notice on the Rev. Robert West, editor of the *Advance*, to either publish a retraction of his false statements relative to the manufacture of comb, filling it with glucose, and deftly "capping the so-called honey-cells by machinery"—or take the consequences of a law suit. After much squirming, he published a retraction, saying: "We were misled by what seemed to be good authority."

In the case of Mr. Freeborn, we are well aware that the bees did *not* annoy or damage the sheep as claimed. In the case of Mr. Bohn it has been shown that the bees cannot puncture sound grapes, and that they did no damage to the raisin industry. These cases grew out of the jealousy and ill-will of neighbors, and the bee-keepers should be defended in their rights, in the interest of the pursuit in general.

A few cases have been noted where the bees were a *real* annoyance and *injury* to neighbors—in all such cases it is but just and right that the bees should be removed when a compromise cannot be otherwise effected.

THE BEE-KEEPERS OF AMERICA should lose no time in joining an organization created for the purpose of defending the rights and protecting the interests of bee-keepers. Where there has been only hundreds during the past year, there should have been thousands. It has to some extent been a trial year—an experiment. It has proven a success even with a small membership. Now let us all co-operate, and, if necessary, maintain our rights as bee-keepers in the highest courts of the land? That can be done only by having sufficient money to defray the expenses, and such are usually high. This will be a small matter, if all will bear their part of the burden. One thousand dollars of expenses when divided among 1,000 persons, is only a dollar for each, and can easily be borne; but when one has to pay it all, it becomes a heavy burden; and, to many, one that would be impossible to bear. United effort is essential to successfully defend our chosen pursuit! If we can raise a column of patriots sufficiently strong to present a formidable front, we shall *dare* the envious ones to "bring on their law-suits," and by "an imposing array" and "unbroken front," gain a lasting and permanent victory!

It is with considerable satisfaction that I submit to the members of the Union the following

FINANCIAL STATEMENT.

There are 324 members in the Union, and there has been one assessment of $1 each for the Defense Fund, making $324; and 25 cents each for the General Fund, for printing, stamps and stationery, amounting to $81.00. Total receipts, $405.00.

The expenditures on defense account were for legal expenses and fees in the Freeborn case, $131; in the Bohn case, $118.75; leaving a balance in the treasury on June 1, 1886, of $74.25.

The disbursements from the General Fund for printing, stamps and stationery, have amounted to $66.00, leaving a balance of $15 in the treasury.

* * * * * *

As I stated a year ago, I neither sought nor desired the office of Manager, and accepted it as a *duty*. I have done my best for the interest of the Union, and am both ready and willing to transfer the office to my successor as soon as such is elected.

Fraternally,
THOMAS G. NEWMAN.
General Manager.

Read at the N. Y. State Convention.

Musings of a New York Bee-Keeper.

WM. F. CLARKE.

A New York bee-keeper, whose native modesty forbids his name appearing in print, has favored me with some notes of his "midnight musings," as he calls them, and I have permission to utilize them in any way calculated to advance the interests of bee-keeping. It may be premised that he is a firm believer in reversible frames, out-door wintering, and hibernation. I have much pleasure in voicing some of these musings and enabling my quiet correspondent to whisper audibly for the benefit of bee-keepers generally. He is evidently impressed with the duty of letting his voice be heard, for he says: "I expect to pass through this world but once. Any thing therefore that I can do, or any kindness I can show to a human being, or any word that I can speak for others, or any new light I can throw on bee-keeping, let me do it now. Let me not neglect or defer it, for I shall not pass this way again."

How to prevent swarming—or at least how I have prevented it for the past two seasons: I reverse the combs containing unsealed brood once a week during the honey-flow. When so reversed, the bees have invariably, in my experience, destroyed all queen-cells, and gone to work storing honey with renewed vigor.

REVERSING COMBS.

Our mutual friend, Mr. Demaree, on page 260 of the *Bee-Keepers' Magazine*, tells us that reversible frames are all fuss and feathers, and says that in his opinion the verdict of practical bee-keepers will be against them. I wish to say that so far as my experiments go I am paid, and doubly paid, if I gain nothing more than the prevention of swarming, and keep my bees at work while I am away attending to other business. It is no small satisfaction to know that they are busy in the hive, and not up a tree!

CHEAP HIVES.

Mr. Pond, on page 275 of the *American Apiculturist*, writes a good article, but I take exceptions to what he says in favor of cheap hives. He thinks that a hive should be constructed as plainly and simply as possible, with as few "contraptions" as necessity demands, and is of the opinion that a plain box with a few rabbets is all that is needed. Would he advise a $1 hive for a $10 queen? Or a cracked box for a $20 colony of bees? What would he think if I should advise a $50 harness to put on a $5 mule? The business-like modern hive with its reversible brood-combs and reversible section-frames; with its side-storing arrangements, movable inside upper story and surplus receptacle, ends of brood-nest packed solid to retain the heat; so arranged that cool nights do not drive the bees out of surplus boxes, nor the hot rays of the sun drive the bees out of the body of the hive—requiring no cellar to winter the bees—but so arrayed that with the division-boards placed close to five frames containing the brood-nest, and above that five frames containing the honey stores, all can be packed outside with sawdust 5 inches thick—may not be so charming an object to the eye of the painter or poet as the artistic little single-walled hive on the verge of a splashing mountain brook near an old-fashioned farmhouse, its roof covered with moss, and the queer old couple on their daily rounds among the bees looking for swarms.

But sentiment is a secondary consideration to the practical bee-keeper, and it is the unromantic bee-hive that rapidly coins the golden honey into chinking dollars. A big guarantee from the makers of dollar hives does not help a bee-keeper much when he comes to place his products in the market. There they must stand or fall on their merits, in competition with the honey stored in the new-process hives, and no guarantee can compensate in the slightest degree for the ignorance of the men who build cheap hives and try to persuade their customers that any thing in the shape of a box so fixed as to hold frames, is as good as the best hive ever constructed. We want a hive adapted to good reversible combs, so that we can get the honey out of the brood-nest and up into the sections, and one in which the bees can be readily packed so they will hibernate and pass the winter in safety. Cheap hives are a nuisance to such as believe in outdoor wintering, and who prefer chaff hives on hibernating principles. Good, double hives built on hibernating principles and good management generally must now co-operate in order to secure even moderate success, and to build up a highly prosperous business, the conditions must be unusually favorable.

ERAS OF BEE-KEEPING.

The first era was that prior to the introduction of the suspended movable frame.

The second has lasted for about 40 years, and has been marked by the use of suspended movable frames, the extractor, and comb foundation.

A new era has now arrived, and we are on the brink of a great revolution. Henceforward hives will be handled instead of frames, the extractor rarely used, and surplus honey produced in the comb, and kept stored in a state of nature until sold and eaten.

DISCOVERING THE ADVANTAGE OF REVERSING COMBS.

One day I and a few fellow bee-keepers were experimenting in my apiary. Mr. Dakin and myself were looking over a hive, when we accidentally broke a very heavy comb of honey in such a way that we could not return it to the hive right side up. Mr. Dakin said that we must put it back somehow bottom side up. I took a saw and cut off both ends of the top-bar close up to the side-bar. Reversing the frame, we tacked a strip to the other side of the frame as a top-bar, so the frame would hang suspended as before, only the other side up. We closed the hive, put on the honey-board, also the sections, and left the hive for about one week. When it was again opened, we found the honey all removed from the reversed frame and stored in the sections.

I again tested the effect of reversal with an old box-hive, placing an empty Langstroth hive on top of the box-hive, now bottom side up. We cut a hole in the bottom-board of the Langstroth hive. In less than three weeks the bees had transferred themselves and all their stores to the Langstroth hive. Many subsequent experiments with reversed frames have satisfied me that bees will work more vigorously and gather just as much honey, and I think *more* than if the extractor is used. Bees appear to get discouraged if you take away their hard earnings with the extractor; whereas, by reversing the brood-combs, the bees find the honey out of its natural position, and will at once all go to work to elevate it and place it just where you want it—in sections ready for the market or table. This is a great advantage, for we all know that honey in sections will command a higher price than the extracted article, so augmenting the profits of the bee-keeper.

CHIEF ADVANTAGES OF REVERSIBLE FRAMES.

I now make my frames not only reversible, but interchangeable, for use in these ways, viz:

1. As brood-frames.
2. When empty of combs or foundation, they answer for sections.
3. In this form they can be placed outside the brood-frames for side-storing, and when nearly full of honey, they can be lifted out, reversed, and then placed in top, movable, interchangeable surplus-arrangements—bees and all. New side-storing sections can be put in their place to be reversed and placed on top in their turn as the honey-storing proceeds. By this means we start the bees at top-storing, and get them the more readily to finish up sections.
4. When the brood-frames are reversed and the bees remove the honey "up-stairs," the queen has more room to deposit her eggs, and thus a smaller number of frames answers for the brood-nest.
5. Next follows a most important advantage. All queen-cells will be destroyed and swarming prevented by reversing the brood-combs. If this be done every six or seven days during the honey-flow, the bees will devote all their energies to honey-gathering until the harvest is over, when they may be divided, one-half receiving a new queen.

DOUBLE-WALLED HIVES.

Having worked single and double-walled hives side by side, I know that fully 50 per cent. more honey can be obtained in the double-walled hives. In single-walled hives the bees are apt to forsake the section cases during cool days and nights, while on hot days and nights they hang out and refuse to work. It is then that the swarming fever is apt to seize them in the very height of the honey-flow, and much valuable time is lost when it is most precious. The fluctuations of temperature do not affect double-walled hives, and the bees keep the even tenor of their way and work while the season lasts, without let or hindrance. By the use of double-walled hives we get brood quicker in the spring (as in heat there is life, and in cold there is death), and a steady warmth without fluctuations is essential to brood-rearing.

Recognizing these indisputable facts, various difficulties are surmounted, such as, how to keep the bees at home; how to make them gather honey whenever there is any to be had; how to make them place it in where the owner can sell it in its natural shape, as the bees make it, so dispensing with the extractor, honey-boards, and single-walled hives.

One item more: Single-walled hives cannot with safety winter bees on the summer stands, and for one, I will quit the business if I cannot winter my bees on the summer stands.

I winter bees on the summer stands as follows: First, I contract the brood-frames to six, and push up the division-boards snug. This I do about Sept. 15, after taking all surplus caps away. Afterwards I put the surplus-arrangement above the brood-nest, which is the same size as the six frames below. Into that I put five frames of solid, well-ripened honey, which gives the bees at once a sufficiency of natural stores. I cover them with a woolen sack of sawdust. I now have a hive inside of another, as one would say, 9 inches wide by 15 inches long, and 21 inches in depth, surrounded with 5 inches of packing on all sides and the front, both with sawdust 21 inches deep, and the sack on top makes 4 inches more. I now bank up on the back and sides with earth nearly 4 inches, so that no air can get under the hive. The entrance I leave open 5 inches by ⅜. On that plan I have been successful.

It will be noticed that I place the honey above the bees, which is where they would place it if they had the chance to do so. Naturally bees go up instead of sidewise in search of stores. I never look for pollen, neither do I feed sugar. Honey is what they want, and honey they shall have. You may say it is extravagant to give the bees so much honey. What do they want with 50 or 60 pounds of stores? Well, I know how to dispose of what they do not consume. In the spring I take away the five upper frames, and replace with frames of sections with foundation starters as early as it is safe to unpack them. What honey is left in the frames taken away I uncap and put them below, outside the division-boards, which space allows two frames on each side. The bees will have a busy time elevating the honey to the sections, and will set the queen to at once put the crown on her head and make things hum.

Here I am in the *sixth* season, with the best record yet as to wintering my bees. Here I am the *third* season with the best record I ever had, getting on the average, spring count, *two hundred and eighty pounds per colony*. So much in favor of reversible frames and double-walled hives, being a surplus over single-walled hives and suspended frames of 200 pounds per colony in the same locality.

Now, to be more definite in setting forth the claims of reversible frames as compared with suspended ones, I make the following calculations: Safety in wintering, 20 points. This is because they are packed early, giving them natural stores in their proper position, and left on the summer stands where they are not looked at nor disturbed in the least until settled weather in the spring.

Economy, 20 points in two ways: First, not so many hives to handle; second, placing the honey in a compact form, easy to sell, and dispensing with the extractor, and daubing up the entire apiary with cappings and empty frames.

Convenience, 10 points, because we manipulate a hive in 20 minutes or less, and the hive is as easy and light as a single-walled hive.

Superiority, 40 points, because we can get nearly 60 per cent. more honey out of our bees. The reversible frame is no longer an experiment. Experience has demonstrated its superiority, and if I were obliged to return to the suspended frame, I would quit the business altogether. The reversible frame is free from all complications, and easy to manipulate. Its rival, the suspended frame, has received honorable dismissal from my apiary, its day being done, its usefulness gone, and its place more effectively filled by its reversible successor.

Guelph, Ont.

For the American Bee Journal.

Wintering Bees in Warm Temperatures.

IRA BARBER.

Mr. C. Theilmann, on page 311, tells us that he has had trouble with bees this spring, by their getting too hot. He says that he kept them in a building above ground, and that between the warm weather and the great heat that the bees created, they became so hot that they nearly suffocated. I do not doubt his statement in the least, for I had just such a case as he describes, some 30 years ago.

I do not consider his criticisms of my plan of wintering bees just or manly; nor do I think that he has any reason for connecting it with the plan that I gave in the essay that he mentioned. I stated that the cellar should be damp where the temperature was allowed to become so high, and that no currents of fresh air should reach the bees.

Mr. T. asks if my article would not have misled many bee-keepers had it not been for Mr. Doolittle's sad experience in warming his cellar by burning coal oil. Now I wish to say that I have never recommended his plan, for the reason that it did not prove a success with me. I have never tried Mr. Doolittle's plan, for the reason that it proved a failure with him; but I did wish last winter, that I knew of some way to raise the temperature of my bee-cellar about 40° higher than it was.

Again, he says that I have gone down one-half in my idea of the proper temperature, and asks me to account for it. The explanation is very easy, for my bees are now at home, and are wintered in a large cellar, one that 600 colonies could be wintered in, and not crowd it as the one was crowded when the high temperature was given.

The reason why a thermometer was not used, was because my bees were 20 miles from my home, and I was satisfied with the tests that I was able to make in November and April. I have not given a colony ventilation at the top of the hive for 20 years, while in winter quarters. Mr. Doolittle said that I knew nothing about the temperature of my bee-cellar. Is it not reasonable to suppose that if the temperature was 65° in the cellar, when the mercury was near zero outside, and at 65° outside the mercury showed 90° inside, that the temperature was but slightly affected either with heat or cold?

Mr. T. thinks that the mass of bees 5 feet high were smart bees to be able to separate all right. As he only gave the height of the mass I will give the length of the pile, which was 19 feet, and the width 13 feet—all one solid mass of bees, to all appearance, and yet all the loss was just one queen. Does any experienced bee-keeper believe that a door could have been opened to cool them off, without a great loss? They were left to cool off slowly, when the weather changed.

I have no time to follow Mr. Theilmann in all the points he has taken exceptions to regarding my high-temperature theory, but I will say to him, and all others who may doubt my statements, that there can be nothing said by any one that can change the fact, that it proved a complete success for the 6 or 7 winters that I wintered my bees in that way. Why, I have been wintering my bees at 45° to 50° for the past two years, is because they winter fairly well; and I have not yet been to the expense of partitioning off the cellar, for the reason that I may take my bees away to better fields at any time when our pasture for bees fails in this locality. I hope that none will try to winter their bees at so high a temperature in a dry room or dry cellar, for my experience is that it cannot be done without heavy loss.

De Kalb Junction, N. Y.

For the American Bee Journal.

Eradicating Foul Brood.

JOS. H. FISHER.

In this neighborhood foul brood has existed for nearly a year, and most of our bees, both tame and wild, have been thoroughly inocculated with the disease. Even if we could effect a cure, under these circumstances, would they not bring the disease home again from our neighbor's defunct apiary, old combs and hives lying around loose, bee-trees, etc.?

I would not discourage apiculture by any means, for the value of honey for medicine alone, if for nothing else, could not be dispensed with. But, let us face the truth and the evil, and fight our best to exterminate it. There are remedies to stay the disease and keep it in bounds, that are but little expense or trouble, but I cannot say that it will effect a cure, except with the aid of time and surrounding circumstances.

I have melted all my old combs into wax, and subjected my frames to a heat that would kill any animal or vegetable matter, and have laid them carefully away for future use, where they will not be exposed to the disease until I am sure it is safe to use them. My hives I shall heat in the same way; or clean and repaint on the inside and out, making all cracks and joints as tight as wax. I have a few healthy colonies that I shall watch very closely, and will not try to increase my stock, and I will treat with the best remedy I know of, until I lose them or effect a cure.

It might be a good idea to call a bee-keepers' convention and devise some means to exterminate this thing; and by so doing we can act in harmony. I think unless every bee-keeper takes an interest in trying to annihilate this foul brood, it will be hard to get rid of.

Napoleon,∽ Ohio.

For the American Bee Journal.

Description of the Hive I Use.

J. H. ANDRE.

Last season I gave a description of a new hive that I had tried, and as I have made some alterations and improvements in it, I will describe them also.

For the body of the hive use lumber 29-32 of an inch thick, cut 16 inches in length. Use square strips in the corners to nail through, of the exact thickness of the lumber, and nail through both ways. This is far better than a mitre joint, as it cannot give, warp or split. The body of the hive is 11⅜ of an inch deep, with frame-rests cut down all around the top ⅝ of an inch, and ½ of an inch back. A cross is put in exactly in the centre of the hive, of 5-16-inch strips, 1½ or 2 inches deep. The frames are made of ¼x1 inch, and 7x10 inches inside; 20 are used. Hang in 5 in each space, with the inside one nearly close to the cross-piece, and with their inside ends close against it. The inside top-bar should project only ⅜ of an inch, and the outside one ¾ of an inch. Opposite corners should be warm frames, and the other two cold ones. This gives the bees a chance to get to any part of the hive without going under or outside of the frames, and a frame of brood or honey may be taken as desired.

In shipping, 4 or 5 frames will go in a little space, and be in neat shape.

A colony may be confined in ¼ of the hive and winter safely. No tin rests are needed, as the inner ends of the frames may be loosened easily.

For the bottom use pieces 22 inches long, one 8, and the other 10 inches wide, with an entrance cut in ⅜x12 inches. Bevel the edge of a piece of board 4¼ inches wide, to give it 1½ inches drop, and fasten it to the end of the bottom-board at the front with a hinge at each end; this gives an incline, and in winter it may be turned back, and if wintered out-of-dors it will keep out the snow; if wintered in-doors it will keep out the light, and takes less room; but it does not close the entrance.

The bottom is ¾ of an inch thick, as is also the cap. The side-pieces of the cap are 7¼, and 18 inches long. The gables rise to 9¾ inches. The roof is 12x22 inches (two pieces of course). The cap is nailed together with strips in the corners, the same as the body of the hive. The case rests on top of the hive, and may be arranged as desired. I have used some cases without any divisions, simply by nailing strips across the bottom of the case where the sections come together. I believe that style will be used altogether in the near future, for it is less work to make it, and in taking out and putting in sections it requires not half the labor. More room may be used on a hive, and it is warmer for the bees.

To make three hives it needs one board ¾x12 inches, and 12 feet long, for roofing; one 29-32x12 inches, and 16 feet long, for bodies; one ¾x10 inches, and 16 feet long, for caps and bottoms; and one ¾x8 inches, and 16 feet long, for caps and bottoms. Only three different widths are used, and the lumber cuts without waste.

After examining plans of all the hives I have ever heard of, I have adopted this, for it is the only style that may be used and have the brood-chamber in the shape it should be—square—without heavy, unhandy frames, and also secure the other advantages described above.

Lockwood,♀ N. Y.

For the American Bee Journal.

Changes in Apiarian Fixtures.

T. E. TURNER, (50—90).

In looking over the pursuit of apiculture for a few years past, and viewing the many changes that have taken place, and that have been advocated by bee-keepers, the inquiry has arisen in my mind, have not too many changes been made in apicultural fixtures for the interests of apiculture in general? I verily believe that "too much change" for beginners is very discouraging, and that in some way there should be more uniformity among bee-keepers, in the hives, sections, section-racks, and shipping-cases used, allowing a change in these and other things used in the apiary only after something better has been tested and adopted by many of the most experienced apiarists.

Every beginner, especially of small means, should have the very best and cheapest appliances to begin the business that can be obtained. If he gets catalogues from different supply dealers and examines them he will find a great many different hives, sections, section-racks, or surplus arrangements, shipping-cases, and various other things, in use and highly recommended for use by those engaging in the pursuit, and he is bewildered. He knows not which to adopt, and is just as likely to choose the poorest one of the list as the best, until he has experience and knows what is best. Experience in this matter has prompted me to write this article for the benefit of the inexperienced.

There is but one solution of this difficulty, and that is for the beginner to take the advice of some reliable bee-keeper of his acquaintance, as to what fixtures he should use, and the advice given will generally be such as should be followed. There also should be a recommendation, adoption, and use of an article by several experienced bee-keepers. The writer has recommended hives that he was using himself for the adoption and use of beginners, but now, after 13 years' experience in the use of various hives, and watching the reports from different experienced bee-keepers, he can heartily recommend to beginners a hive that he does not use.

Look at the changes in hives from what was formerly used. In my A B C days in bee-keeping, we had a hive in two sections, with a double set of frames of the Gallup style. Then we had the patent Buckeye hive, with a shallow surplus frame on top of the brood-frame; then we used the hive invented by Rev. L. L. Langstroth, for a short time, until a bee-keeper made for us what he claimed was better than that, a 9-frame hive, 11x16 inches inside measure. After a careful rescearch after the best hive for all purposes in four years, another change was made, and the bees were moved into a Langstroth style of hive holding 8, 10, 11, 12 and 13 frames, 11x11 inches inside measure, where they still reside. Having visited many bee-keepers who had more varied experiences in changing from one hive to another than myself, the universal opinion expressed is that there has been too much change in hives among bee-men.

One uses a particular hive with a specific object in view, and he will keep on changing hives until that object is attained. Another individual will start out with a different hive, with a different object in view, and he will repeat the conduct of the first, until he finds the hive to suit the special purpose. Then the same individual may have different objects to gain at different times, and if they are numerous, he will find that different hives must be used to accomplish them. Then the wise apiculturist wants the hive that is adapted to the attainment of the greatest number of objects, in order to be successful in the highest degree. Bee-keepers want to keep in view the fact that success in their pursuit is somewhat like that in other pursuits—the greater the number of ends successfully met by the use of a single instrument, the better in the economy of time and expense, other things being equal.

Though I am not using the Langstroth hive, but may use it in the near future, and have no hives of any kind for sale, my advice from past experience would be to all beginners, to adopt and use the 8 or 10 frame Langstroth hive, as adapted to accomplish the greatest number of apicultural objects of any hive adopted and recommended by a large number of the "experienced." Every feature that is of any "intrinsic value" to the great mass of bee-keepers, experienced or inexperienced, is contained in it.

New hives, or anything new for the use of bee-keepers, that is of value, should be encouraged, but beginners should beware lest they are driven here and there until shipwrecked in the beginning of an apicultural voyage by various recommendations of new things; far better for them to accept and act upon the advice that comes from the experience of many tried sailors on this line. Experimenters are a great blessing in apiculture as well as in any other pursuit, and yet the results of their labors should be tried and recommended by the experienced rather than by the beginner; for one is better prepared for failure than the other, if such should be the result. Change is all well enough when it is made with caution, but too much change is both expensive and dangerous to our pursuit.

Sussex,⊶ Wis.

For the American Bee Journal.

Feeding Sugar Syrup to Bees.

EUGENE SECOR.

I am glad to see the AMERICAN BEE JOURNAL, and many prominent bee-keepers also, expressing themselves on what I have always thought to be the right side of this question of feeding. There is little use in bee-keepers, *i. e.*, honey producers, trying to quiet the public fear of adulteration when any considerable number of them practice feeding on a large scale. If we cannot make bee-keeping pay by utilizing only the nectar provided by nature for this purpose, I am certain that in the outcome we shall not by supplying cane syrup to winter our bees on.

But many apiarists are not content to feed merely enough for winter, but supply it also in the spring, and some of them in the summer, during a cessation in the natural yield. Now, I do not care how many professions of honesty a man may make, I do not believe that there is one living so far above suspicion that if he feeds his bees anything cheaper than honey, but what *some* of his neighbors will say that *his* honey was not gathered by the bees; and if they repeat the story of his practices, a great many people will cease to use honey, because, as yet, it is only a luxury, and very few persons will buy, if they do not believe it to be the actual distillation of flowers—something which they can get in no other way.

If the practice of feeding sugar for the purpose of increasing the yield of honey continues, the time will come, when, by the increase of the product and the decrease of consumption through fears of being defrauded, honey will be cheaper than sugar. That time has nearly arrived now on the east side of the Rockies, while on the west side it has actually been the cheapest. In California I suppose they never feed sugar, and no one would ever expect to find adulterated honey there.

In the Northern States the practice is defended on the pollen theory argument that pure cane-sugar is the only safe winter food. If that is so, this world has been running wrong for a long time. If the Almighty ever makes another planet which is to be the home of honey-bees, some of these nineteenth century discoverers ought to be called to the council before the job is undertaken

When I am convinced that grass is not the proper food for the cow, and that the pig's nose was made for ornament and not to dig artichokes with; that hens ought to chew the cud and sheep roost in the old apple-tree, I may come to the conclusion that God did not know what He was about when He provided honey as the proper food for bees.

But I do not wish to argue the pollen theory or any other theory. We ought to produce only the pure article of honey, and to convince people that we are doing it, we must avoid the *appearance* of evil. Suppose a few colonies do die in winter because they happen to have too much pollen, or because we do not know enough to regulate the temperature so that they will not eat it; or suppose the remainder do not store quite so much surplus honey because they have to lay by enough to winter on; perhaps what they do give us will bring just as much money, because a scarcer article.

To illustrate: It requires a certain number of bushels of wheat to feed this world for a year. If a few millions less than the required amount were produced in any one year, would it not bring about as much money as though the crop were twice what was needed? But honey is a luxury, and he will succeed best who produces the nicest article and gets it to the consumer with the least suspicion of fraud about it. There are always plenty of people who will buy such luxuries and pay good prices for them.

Buying sugar by the barrel to feed bees, and selling honey by the dray-load is not for the best interest of the industry, in my opinion.

Forest City,♂ Iowa.

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, **$2.50**. Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

Local Convention Directory.

1886. *Time and place of Meeting.*

July 6.—Hill County, at Peoria, Tex.
H. A. Goodrich, Sec., Massey, Tex.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12-14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Working on White Clover.—J. L. Strong, Clarinda,♀ Iowa, on May 31, 1886, writes:

Bees wintered well, and they now gather honey from white clover, when the sun shines hot. Unfortunately we have had but few days of clear weather since fruit bloom came out. Last Saturday the gain was 3½ pounds in one colony on the scales. Yesterday it was rainy, but to-day they are booming again, and I think the increase will be better than it was Saturday.

Return of Swarms.—A. H. Lind, Calumet Harbor,⊶ Wis., on June 3, 1886, writes:

On May 17 one of my colonies cast a swarm, but the bees soon returned to the hive; on May 18 and 19 they did the same thing; on the 19th I put on the sections and they did not swarm again until May 23, but then again returned to the hive. That day I heard young queens. On the 24th they swarmed with success. What was wrong with that colony?

[The queen was evidently from some cause unable to go with the bees, until the 24th, when a young queen accompanied them.—ED.]

Flattering Prospects.—Mr. E. M. Coombs, Memphis,♀ Ind., on June 1, 1886, says:

The prospect for honey is very flattering. I have extracted about 60 pounds, and have had two good swarms. I lost one on account of being away from home.

Paper Comb.—D. Brown, Cuero,♀ Texas, writes:

In conversation with a gentleman from Kentucky, the subject of bees came up, and he said that he had a cousin in Kentucky who had about 200 colonies of bees, who used artificial comb made from paper. and who said that the comb was perfect, cells of the right size and proper depth, and sold for 50 cents per yard. All the bees had to do was to wax the paper and fill it and cap it. He was sure that he was not mistaken. I have been working with the bees 6 years, have been a constant reader of the BEE JOURNAL for 4 years, and I have never heard of this "paper comb" before. If there is such a thing, why is it not spoken of or advertised?

[There is no such thing. The man is mistaken, and like many others, talks about something he knows nothing of.—ED.]

Swarms and Swarming.—R. F. Holtermann, Brantford, Ont., writes:

In answer to Mr. J. C. Rawlins, on page 330, I would say that I have had a natural swarm with nothing nearer a queen than eggs in the queen-cells. The swarm may have come out sooner than it intended, owing to my having examined them a few minutes before they issued. Doubtless they had filled themselves with honey and were nearer being ready for swarming. My first swarm, this year, I had on May 29. It was a fine one.

Queenless Colony, etc.—D. R. Rosebrough, Casey,⊶ Ills., writes:

In my spring report I stated that I had a queenless colony. It has a queen now, but it is not worth as much by $5.00 as the others, for all the other colonies are overflowing with bees, and are working in the surplus apartments. The one that had to rear a queen is only a mere nucleus. Speaking of bees as a nuisance, I have my bees very near a house in which lives my tenant, and he calls my bees tame bees. A part of them are Cyprians. The only trouble is in winter, when the bees speck the clothes hung out to dry.

Length of Drones' Wings.—Dr. G. L. Tinker, of New Philadelphia,⊶O., says:

Recently I have taken the measurements of a large number of dones' wings, and find more variation than I had supposed. The Italians measure quite uniformly ½ inch in length, and 5-32 of an inch in breadth of the large wings. Pure Carniolans are from 1-16 to 1-32 shorter, and the same width. Some of my best Syrio-Albino drones have wings nearly 9-16, or almost 1-16 of an inch longer than those of any other I have found. The breadth is also slightly more than 5-32 of an inch. It occurs to me that such drones are the ones we should get our queens mated with. If we select the most active and swift-winged it will surely add one good point to our stock in breeding up a superior strain of bees. I should be glad if others would take measurements of their drones' wings and report in the BEE JOURNAL. Have any got drones with wings longer than 9-16 of an inch? If so, does the race possess superior qualities?

Honey Locust.—C. H. Dibbern, Milan,⊸ Ills., on May 27, 1886, writes:

I send two specimens of the bloom of the honey locust. You will observe that they are entirely different. Please tell us through the BEE JOURNAL if these are different species, or are they male and female? I will state that they grow on separate trees, and there seems to be about an equal number of each.

[The flowers of the honey locust are what the botanists call *polygamous*, that is, they are sometimes perfect, having both stamens and pistils, and sometimes these organs are in separate flowers. In this case they are evidently upon different trees, and the case is not a very uncommon one. Probably these trees will continue year after year to do just the same thing; still it would not be surprising upon close looking if some of both kinds of flowers should be found on the same tree. I find on one of the specimens sent, both the male and female organs.—T. J. BURRILL.]

Drouth in Texas.—B. F. Carroll, Dresden,♂ Texas, on May 31, 1886, writes:

We have not had a drop of rain since April 24. The honey crop is a complete failure. The horse-mint is in bloom, but we get no honey. If we get rain soon we may have a few pounds from the cotton bloom.

Extracting, Prolific Queens, etc.—26—Jonas Scholl, (72—70), Lyons Station,⊶ Ind., on May 27, 1886, writes:

I commenced extracting to-day—16 days earlier than last year, and 10 days earlier than two years ago. The honey is quite thick, and very good, being mostly from poplar bloom. Bees wintered just splendid the last four years. I winter my bees only on the summer stands, and on natural stores with blankets and leaves above. For rapid increase of brood through April and May, I have not yet seen any better or more convenient arrangement. The leaves and blankets stay on until ready for the surplus arrangement. I have this spring taken more particular notice of the spreading of the brood-nest, and among 70 colonies I have seen but few that failed to rear brood to the very top-row of cells in the frames; so that reversing would not pay on that score. Perhaps my way of retaining the heat above the cluster has something to do with it. On page 279 Mr. Heddon makes a statement that I think should not go unchallenged. He says: "By interchanging and inverting we can develop *one half* more brood than we get from the same brood-capacity in non-invertible hives." Now I claim to have queens just as prolific as any that Michigan can produce, and if he were here I could show him some 65 of them that are running 10 Langstroth frames to their full capacity of brood; and to get them to do double, or even one-third more by any reversible arrangement, is simply impossible. The time set for the meeting of the North American Convention, at Indianapolis, on Oct. 12-14, 1886, is certainly very appropriate, and will, I think, suit Indiana bee-keepers generally.

Excellent Season So Far.—Wm. B. McCormick, Uniontown, ♀ Pa., on May 29, 1886, says:

We have had an excellent season so far in this section for bees and honey. The white clover is now in full bloom, and the bees are booming. So far I have had 12 swarms, two of which were second-swarms; the first being on May 18.

Abundance of White Clover.—Alex Rose, Sullivan,⊙ Ills., on May 31, 1886, writes:

I am among the bees every day. I wintered 22 colonies out of 24, only losing one, and one was queenless, with which I have a swarm which is doing well. I bought 9 colonies this spring for $9, and I now have 48 colonies. Some of the hives of the old ones are full of honey, and the bees have commenced to cap it over, but swarming checks that for a few days. I have been keeping bees for 8 years, but I never have seen such a crop of white clover—the country is perfectly white with the bloom. The linden or basswood is beginning to bloom. I am looking for a large crop of honey this year. I use 2-pound sections. I sold honey last year for 20 cents per pound in sections. Some in frames and some broken up honey I sold for 10 and 15 cents per pound. I do not expect so much this year. My record shows that I put on sections last year on June 16; this year from May 6 to May 12. I expect to take off several hundred pounds of honey before June 16, this year.

Convention Notices.

☞ The 5th regular meeting of the Hill County Bee-Keepers' Association will be held on the first Tuesday in July, 1886, at the apiary of Hon. J. M. McDaniel, of Peoria, Tex. At the same time and place will be held a bee-keepers' honey picnic.

H. A. GOODRICH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

☞ The regular semi-annual joint meeting of the bee-keepers of Hendricks and Boone counties of Indiana, will be held on Thursday, June 17, 1886, at the residence of J. P. Calterson, 4 miles northeast of Brownsburgh, Ind., and 2 miles west of Trader's Point. A cordial invitation is extended to all.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
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At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 7, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Honey of all grades sells slowly at present, and prices are weak—14@15c. being the outside figure for best comb honey. Extracted is in light demand at 5@7c. California comb honey, in 2℔. sections, 9@12c.

BEESWAX.—25c. for good yellow.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The first new comb honey of the season—a sample lot of extra choice—brought 14 cts. We quote: White to extra white comb, 11@14 cts.; amber, 7@10c. Extracted, white liquid, 4½@5c.; light amber colored, 4 to 4½c.; dark amber colored, 3½ to 3¾ cts.

BEESWAX.—Quotable at 20 to 24 cts.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½. Fermented goods, 2½@3c

BEESWAX.—Firm at 22c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—There is an excellent demand for best 1-lb. sections of white honey, and all arrivals sell readily at 14c.; 2-lbs. and glassed sections sell slowly at 12c. Extracted, 7@8c.

BEESWAX.—Scarce at 25@28c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market seems quite dull for all qualities of comb honey, with but a moderate demand for extracted. We quote: Choice, white 1-lb. sections, 17@18c.; the same in 2-lbs., 16@17c.; dark 2-lbs., 15@16c. Extracted, white, in barrels or kegs, 7@8c.; dark, in same packages, 6@7½c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—Small lots of new are arriving, both comb and extracted. There is some inquiry for best qualities, and sales of choice honey can be made in a small way to fair advantage. White to extra white comb, 11@14c.; amber, 7@10 cents. Extracted, white liquid, 4½@5c.: light amber colored, 4@4½c.; dark amber colored, 3¼@3¾c.

BEESWAX.—20@24c. in lots from first hands.

SCHACHT & LEMCKE, 122-124 Davis St.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

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	Price of both.	*Club*
The American Bee Journal	1 00	
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Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

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To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

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☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

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ITALIAN QUEENS.—Tested, $2.; Untested $1.00. **MISS A. M. TAYLOR,**
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Syrian Queens by Return Mail.

TESTED, $1.50 each; Untested, 75 cents. each; 12 for $8.00.—ISRAEL GOOD, Sparta, Tenn.
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23A2t 2119 S. Jane-st., Pittsburgh, Pa.

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IRA D. ALDERMAN,
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G. W. DEMAREE,
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We make the finest Honey-Sections in the World and make no exceptions. G. M. Doolittle says: "The last sections are just complete." James Heddon—"They excel *everything* in the line of perfect workmanship." Prof. N. W. McLain—"The sections excel anything I have seen heretofore." J. B. Mason—"Have received samples from all manufacturers who advertise in the bee-papers. I must say this is by far the nicest section I have ever seen." Jno. L. Janeway—"They seem perfection itself so far as human workmanship can go." Sample for 2-cent stamp. Price-List of Sections, Hives, Syrio-Albino Queens and Bees, and other Apiarian Supplies, free.

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Perils of Summer,	Clothing—what to Wear
How to Breathe,	How much to Wear,
Overheating Houses,	Contagious Diseases,
Ventilation,	How to Avoid them,
Influence of Plants,	Exercise,
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A. O. CRAWFORD, S. Weymouth, Mass.
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NOW READY TO SHIP—Untested Italian Queens at $1.00 each. Send for Catalogue. **MARTIN & MACY,**
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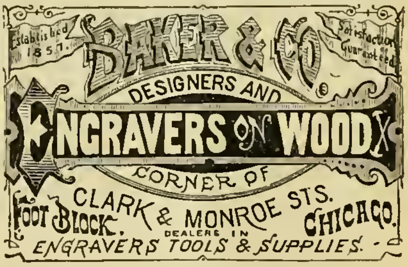
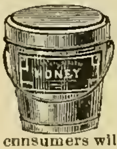


NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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AND BEE-KEEPER'S ADVISER.

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The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $3.50.

ALLEY'S QUEENS.

READY JUNE 1, 1886.

WARRANTED	Queens,	by mail	....	$1 00
"	"	"	per ½ Doz...	5 00
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By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.

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ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

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14Wtf **MAZEPPA, MINN.**

A YEAR AMONG THE BEES,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

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923 & 925 West Madison St., CHICAGO, ILL.

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13,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

QUEENS BY RETURN MAIL.

I AM up with my orders and can send QUEENS by return mail. Capacity, 75 to 100 a week. **Six Warranted Queens for $5.00.** I have the finest breeders I ever had. Also English Rabbits $1 a pair.

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TESTED **Queens.** (Imported Mother), $1.25 each; $12 per doz.—O. N. Baldwin, Clarksville, Mo.
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PURE **Italian Bees**, of the best strain. In Langstroth or Gallup hives. Send for Circular.
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Lewis' V-Groove One-Piece

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First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G. B. LEWIS & CO.,

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April 15, 1886. 16Wtf

40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. Circular Free. **T. L. VonDorn**, *Omaha, Neb.* **None Better**
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Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf **J. VANDERVORT, Laceyville, Pa.**

Bee-Keepers' Supplies,

OF ALL KINDS,

Sections & Comb Foundation

A SPECIALTY.

125 colonies of Bees for sale

in Quinby frames, mostly Italians.

☞ These Bees will be SOLD CHEAP. Send for prices. Also, for Illustrated Price-List.

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BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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DO YOU EAT CANDY?

SEND $1.25 and I will express 5 lb. Todd's Honey Candies, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's New Book mailed free for $2.50. **ARTHUR TODD,**
1910 Germantown Ave., PHILADELPHIA, PA.
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Job Lot—Cheap!

WE have on hand a Job Lot of **20,000** One-Piece Sections with square groove, which we will close out at $3.50 per 1,000, or $2.00 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

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TESTED, $1.00; Untested, 75 cts.
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BY RETURN MAIL

Select Tested **QUEENS, $1.50 each.** Warranted Queens, **75c.** Per doz., $8.00. Strong three-frame Nuclei, with tested Queen, **$2.50 each.**
☞ All Queens strictly pure Italians. ☜

Address, **JAS. F. WOOD,**
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One-Piece Sections,

MADE with a A-groove, warranted perfect, 4¼x4¼ and 1⅞ wide—$4 per 1,000. Five per cent. discount on orders of 5,000 and over at one time.

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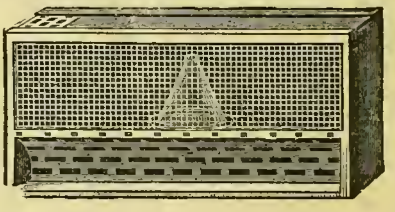

Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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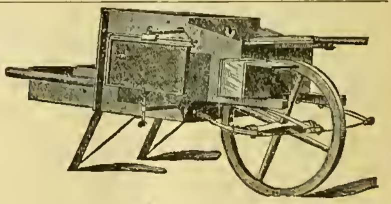

DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

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200 Colonies Italian & Hybrid Bees

FOR SALE,

IN 9 and 10 frame hives, all strong and healthy, wintered in the cellar. Will deliver them aboard of cars—for Italians, **$8.50**; Hybrids at **$7.50.** Will guarantee as represented, or money refunded. **Italian Queens**—Untested, $1.00; Tested, $2.50. Send money by P. O. Order or Registered Letter.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. June 16, 1886. No. 24.

Take Care how you speak or write about one another. Do not set down at a venture that which comes uppermost.

◆

Often it costs more to "trace up" a falsehood than it does to endure the wrong it inflicts.

◆

Price Lists have been received from H. P. Langdon, East Constable, N. Y., and from Mucci & Bro., Lexington, Ky.

◆

Do Everything in the apiary just at the right time. One hour's work done when it is needed is worth two or three at some other time.

◆

Catnip is excellent bee-forage. The flowers are rich in honey, and it blooms late in June, and continues in July and August. It can be raised from the seed.

◆

Bulletin No. 15, issued by the Agricultural College of Michigan, is on our desk. It emanates from the Chemical Department, and is concerning the "Manurial Value of Ashes," by R. C. Kedzie, Professor of Chemistry.

◆

We are Not Responsible for any views or expressions of our correspondents, and must not be supposed to endorse them, unless we distinctly state our endorsement. Hold each individual writer alone responsible for the views stated in the communication—and no one else.

◆

Comb Foundation should be used plentifully when hiving swarms, unless you have plenty of old combs. The manufacture of wax is costly, and takes the time of the bees which should be given to gathering honey. It is economy to give them comb foundation; it saves time and labor, and prevents the loss of the honey-flow, which often is passed and gone by the time a swarm has built out the comb to receive it.

Beginners often write to us for information on the most simple matters connected with the apiary, but they neglect to buy and study a Manual. An exchange gives this wise advice: "There is nothing in which the beginner can better invest a few dollars than in the purchase of a good bee-book. They contain the garnered knowledge and experience of years of our best bee-keepers. It is desirable that those who are commencing should become familiar not only with the necessary but with the best appliances in order to begin intelligently and to continue in the right direction. The natural habits of bees and their requirements should be closely studied, and the care and attention given them that knowledge teaches them to require. The precise condition of the bees should always be known, whether they are weak or strong, without a queen, or in any way requiring assistance from their keeper. To succeed in this industry or anything else, one must become interested in the work, then annoyances and discomforts will seem trivial, as compared to the success which patience and perseverance will surely bring the earnest worker."

◆

Must the Bees Go?—Since the California grape growers seem to have decided that the "bees must go" as well as the Chinese, the *Times* of Oakland, Calif., gives the following under the caption of "A Word for the Bees:"

"The little busy bee" has been honored by man in all ages and countries. No insect has received so great commendation as the bee; and no other has paid back so well, and so honestly for all the good things that have been said of it. It has been a constant, tireless little worker ever since its creation; and works on as uncomplainingly as ever. It does not make a fuss or grumble in the least at its compeer in industry, the Chinee, but says as plainly as though uttered in words, that it can work by the side of anybody or anything. It is a mean thing now to turn around and accuse this quiet little fellow of eating grapes, as some Sonoma county man has been doing in a letter written to the San Francisco *Chronicle*. We rely upon the President to protect the bees of California; at least until such legislation can be had as will settle the grievances between them and the grape growers. Pitch into the Chinese first and get rid of that evil. It will be time enough then to say, "The bees must go."

◆

This has been an Unusual Season, says the Indiana *Farmer*, there has been almost a constant flow of honey since the first bloom of early spring. However, the quantity of honey gathered has not been large; but little more than is required by the daily wants of the bees for home consumption. It has put them in the very best condition, and we stand a good chance of reaping a large harvest; but that harvest, if gathered at all, will come after the 10th of June, in any place north of the Ohio river. Bloom out of season seldom produces honey. The warm, close, sultry nights of June and July produce our honey crop. Years of a carefully kept record verify this.

◆

Mr. W. A. Pryal's Father, of North Temescal, Calif., was on the 24th ult., injured by an accident. He was thrown out of a wagon on a down grade, and one of the wheels ran over him, breaking one of his ribs and otherwise injuring him. He is being tenderly cared for, and hopes are entertained of his ultimate recovery.

Marketing Honey will be the next question to be settled. Before considering long as what market you will take your honey to, just try your home market. Either get some pamphlets on "Honey as Food and Medicine," with your name and address on them, and stating that you have pure honey for sale; or offer it through your local stores at a reasonable price, and you can sell lots of it. Be sure to put it up attractively, and label each package with your name and address, as a guarantee of purity.

◆

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and a Voting Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Voting Blank.

◆

The Oleomargarine Bill has been passed by the House of Congress. The following are the material points in the Bill as it passed the House:

It treats all the oleomargarine and butterine products as counterfeits, and proceeds on the principle that they should be regulated as such. For this purpose their manufacture and sale are placed under the control of the Internal Revenue Department. Provisions are made to cause the manufacture to be as little secret as possible. Special taxes are imposed on the manufacturers, wholesalers and retailers, which are equivalent to licenses. All of these are to keep books, which will show the extent of their business, and the retailer is required in specific manner to make known the imitation product so that buyers cannot be deceived. The article has to be put up in wooden or paper packages; the provisions for canceling the stamps are like those on other internal revenue articles. The fines for failing to brand the article properly or for effacing the branding are heavy, as they are also for failing to take out the required license. Where information is given of violations of the law one-half of the fine goes to the informer. A tax of 5 cents per pound is levied on the spurious product when it is put up in imitation of butter.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

A School Teacher in Southern New England was told by her physician that to live she must seek another climate, and be in the open air as much as possible. She is now in one of the Western States taking care of 200 colonies of bees, with the help of several girls and women. She finds health and money in bee-keeping. So says the *Farmer and Manufacturer*. Now, we would like to hear from that school teacher—Who is she? Where does she live? How does she succeed?

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Building Worker Comb.

Query, No. 264.—What is the best way to get natural comb built with the best results; *i. e.*, in getting all-worker comb, or nearly so?—Cleveland.

Allow newly hived swarms to build it.—W. Z. HUTCHINSON.

New swarms, young queens, small crop. Worker comb-guides or foundation.—DADANT & SON.

Get it while the colonies are not very strong; or else from swarms just hived.—A. J. COOK.

I use comb foundation.—H. D. CUTTING.

Keep strong, prolific queens, and contract the brood-nest, giving the bees room just as fast as the queen can fill the combs with eggs. No drone comb will be built as long as the queen fills the combs with eggs as fast as they are built.—G. W. DEMAREE.

Have it built in weak colonies—or between drone combs—or in a strong or weak colony which has been moved so as to lose most of its field-force; or, better still, on wired frames of foundation.—C. C. MILLER.

Put in starters; give enough drone comb fully built to supply the demand of bees, and cut out drone comb when it is built in frames where not desired. Ordinarily foundation will be found far the cheaper and better for the purpose. It requires the knowledge and experience of a Doolittle, and a locality similar to his, to get good results in worker-comb building without the use of foundation. I prefer foundation about 6 to 7 feet to the pound for the brood-chamber, fixed on wired frames.—J. E. POND, JR.

1. Hive swarms on full sheets of worker foundation, securely held to proper position by wires. 2. If you do not use full sheets use guides of foundation not more than ¾ of an inch wide, and the whole length of the top-bar, and hive on them. 3. Use swarms of brown German bees.—JAMES HEDDON.

Get it built by swarms just hived, or nuclei, the latter preferred, having a young laying queen. If swarms are used, contract the hive to 5 or 6 frames, and put on the surplus arrangement. If no foundation is used in either, worker comb will be built below and drone comb above. If foundation is used in the sections, worker comb will be built in both as a rule.—G. M. DOOLITTLE.

The best way is to give the bees (if a swarm) a small brood-chamber, with starters of heavy foundation 2 or 3 inches wide. By way of caution I will say that it is not best to hive a swarm in a small brood-chamber—the space must be ample or the swarm is very liable to swarm out. The contraction is to be effected on the third day after hiving. Colonies with young queens are not apt to build much drone comb, but instinct teaches them to do it, and in my opinion a colony does better with a few square inches of drone comb.—G. L. TINKER.

* * *

Strange Actions of Bees.

Query, No. 265.—Last summer I had several colonies that acted as if about to swarm, but instead they would crawl into the adjoining hive. They did not seem to fight or rob, but simply to make it lively for a short time; then they would return to their own hive and quiet down. They repeated that several times during the summer. They did not do very well in storing honey. Can you tell the cause of their actions?—Iowa.

No.—W. Z. HUTCHINSON.

Discontentment, I should think.—H. D. CUTTING.

Perhaps the hives were too close together. I never had bees to act in the manner you have described.—G. L. TINKER.

I cannot say, as I never have seen bees act so. If I had a colony that repeated such bad actions, I would re-queen it.—JAMES HEDDON.

You do not say whether the bees took wing as if they were going to swarm, and you do not state how far the hives were apart. As you state it, I infer that the hives were too close together, otherwise the bees would not have "crowded" into the adjoining hive. In a poor season bees will do any and everything but gather honey, if you manage them badly.—G. W. DEMAREE.

This conundrum cannot be answered satisfactorily, as not sufficient data is given to enable one to form a definite opinion. I should judge, however, that the colonies might have been queenless. Possibly they might have been lacking in stores. If neither of the above conditions, I give it up. When the diagnosis of a difficult case is wanted, every symptom should be given; and even then a personal examination may be needed in order to make a correct diagnosis.—J. E. POND, JR.

Late in Occupying the Sections.

Query, No. 266.—One of my old and large colonies, although lively, and seemed to be doing well, and cast two swarms, did not go into the honey-boxes to store honey until in the fall. What was the trouble with them?—Iowa Falls.

Perhaps the swarming business.—C. C. MILLER.

Too many swarms came from it.—W. Z. HUTCHINSON.

In this locality it would be too many swarms.—H. D. CUTTING.

Colonies that cast second swarms seldom make any surplus. They were left too weak in numbers to enter the honey-boxes.—G. L. TINKER.

Too many swarms. One swarm from a hive gives the best results in surplus. With the second swarm went what what would have been your surplus, had they staid.—G. M. DOOLITTLE.

They did enough besides. If our bees send out two good swarms, we usually ought not to expect much honey.—A. J. COOK.

Considering the honey-flow of your locality, I surmise that your bees did so well in swarming that they did nothing else.—JAMES HEDDON.

They were weakened by casting two swarms just at the time when they ought to have been working in the honey-boxes, and the early honey-harvest was over before they got strong enough to enter the surplus boxes. They recovered their strength in time for the fall harvest. In my location no colony can cast two swarms and give any surplus honey, unless they store it before the first swarm issues.—G. W. DEMAREE.

Who can tell without an examination (and sometimes not then) what causes the peculiar vagaries of our bees? Probably the combs were spaced too wide apart in the brood-chamber. Bees sometimes refuse absolutely to go into sections, but since I have adopted the plan mentioned in the BEE JOURNAL a while ago, I find no trouble; that plan is, shave combs to ⅞-inch wide and put them into the brood-chamber just bee-space apart, putting in sections as soon as the honey-flow begins.—J. E. POND, JR.

* * *

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○+ east; +○ west; and this ♂ northeast; ˜○ northwest: ○˜ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

When to Unite Weak Colonies.

G. M. DOOLITTLE.

I wish to explain my position regarding Query, No. 246, as I notice that scarcely one of those answering that query fully agree with me. Most of them seem to think that if the uniting of weak colonies is to be done, the earlier in the season it is accomplished the better the result; while from years of experience along this line, I am positive that such early uniting is a mistake.

One says that if united early "two weak colonies will sometimes pull through; if left alone, they may die." This is just exactly what I used to think, and so practiced early uniting till I became convinced that if a colony would "pull through" at all it would do so alone just as well as when united. After being forced to this conclusion, I thought to more positively prove it; so, one spring, as I had 10 weak colonies I united 6 in one hive, 3 in another, and left one alone, which was scarcely an average of the whole, as to strength. This uniting was done about May 1, and in less than three weeks' time the colony formed by uniting the 6 was all gone, but 8 bees and the queen, when I preserved the queen and closed the hive. During the same time the one not united "held its own," while that where the 3 was put together was scarcely better than was this. On June 10 the one having no help had by actual count 85 bees beside the queen and the one made from them, 102.

As I was then anxious for all the bees I could get, I did the best I could with them without helping them from other colonies. The one having the 85 bees built up and stored 5 pounds of honey in sections, besides having enough for winter; while the other got in good condition to winter safely, as did the other. Since then I have united no more weak colonies in early spring.

After a careful watching I find the reason for this seemingly inconsistent state of things to be, that with united colonies the bees seem to be incited to great activity, by strange bees being thrown together, thus starting a large lot of brood, the care of which wears their life out so that they perish with old age before any young bees hatch to take their place, while those not united do very little, and rear only enough brood to take the place of those slowly dying off, thus keeping their numbers about good till settled warm weather comes, when these few (now) young bees are able to hold 5 times the brood they could in early spring, so that they now rapidly increase.

From the above it will easily be seen why I would not unite weak colonies early in the season.

Now for the reasons why I would unite just before the honey harvest, rather than let each colony build up, as most of the answers say we should do: If these colonies are left to themselves the result will be little if any better than I gave, from the two mentioned above; while by uniting just before the honey harvest I secure a splendid yield of honey from the united colony and get the two in good condition for winter.

My plan of work in uniting, and looking toward that end, is as follows: As early in the spring as the bees can be looked over, all of the weaker colonies are shut on as few combs as they have brood, in using a division-board for contracting the hive. They are now left till warm weather comes, being sure that all have stores enough where they can conveniently get at them to carry them until this period. They are now built up as rapidly as possible by reversing the brood, etc., so that by June 1 the best of them will have five frames of brood, others four, and so on down to one, for the very weakest. As soon as the best has its five frames filled with brood down to the very bottom corners (and none are allowed more combs till they have them thus filled), a frame of hatching brood is given to one having but four frames and an empty comb put in its place. In taking a frame of hatching brood in this way I generally take all the bees there is on it right along, only being sure that I do not get the queen, so that all the young bees on this comb helps to give strength to the next weaker.

In a few days a frame of brood and bees is taken from each of these two five-frame colonies, and given to the one having but three frames, and so keep taking until all have five frames each. Do not make the mistake and try to strengthen the very weakest first, as we are often told to do, for by so doing from ½ to ⅔ of the brood will perish from cold. By the above plan we are always safe, and advancing warm weather is in our favor also.

In a few days after all have five frames of brood, we are ready to unite, and if all has been done as it should be, the uniting will be done about the time white clover begins to yield honey nicely. To unite, look the frames over of No. 1 until the queen is found, when this frame having the queen on is put outside the hive. Now spread the frames apart of No. 2, when the four frames of brood, bees and all from No. 1 are carried and placed in each alternate space between the frames of No. 2, closing the hive. Return the frame having the queen on to No. 1, placing beside it an empty comb; adjust the division-board and the work is done.

In two or three days put the sections on the hive No. 2, or tier up for extracting, and see what a "pile of honey they will roll up." At the same time place an empty frame between the two filled ones in No. 1, and in a few days you will have a frame filled with as nice worker-comb as you ever saw. Nearly all the old bees carried to No. 2 will have returned by this time, so that No. 1 is a splendid, strong nucleus, just right for building nice, straight worker-comb.

As soon as the first frame is full of comb insert two more empty frames between the three full ones, and thus keep on till the brood-chamber is filled. If at any time they should start to building drone comb, then use frames filled with foundation, for this is the time foundation can be used profitably. By fall this colony will be in good condition for winter, while No. 2 will have given three times the honey the two would have done if left to themselves, or had they been united in early spring.

Thus, in brief, I have given the reader the way experience has taught me to be the most profitable in handling weak colonies.

Borodino,⊙ N. Y.

For the American Bee Journal.

Work in the Apiary.

G. W. DEMAREE.

Some years ago I read with greediness everything in the shape of bee-literature that fell in my way. I have changed wonderfully in this respect. I now read nothing concerning bees but such as promises to instruct or amuse me. With these preliminary remarks the reader will be prepared to understand what I shall have to say about Dr. Miller's little book, "A Year Among the Bees."

I have read this little modest work with more than ordinary pleasure. Not that I think that the book gives the best methods of apiarian work as a general thing, but because it contains a life-like picture of "work in the apiary" and in such a variety of work and manipulations I have gathered some really valuable hints that I shall profit by in the future. One of the pleasing features of this little book is, it is wholly free from the advertising feature so prominent in most works on bee-culture. The experienced reader, when he lays down Dr. Miller's "Year Among the Bees," cannot but feel graetful that he has not been bored with the author's horizontal, longitudinal or perpendicular bee-hive, or some other bee-trap. In extenuation of this advertising feature in our bee-literature some have put in the plea that Father Langstroth's standard work advertised a new bee-hive. I have to say in answer to this that Mr. Langstroth and his contemporaries introduced, and advertised a radically new system of bee-keeping which was essential to the use of the new hive. No such causes as led Mr. L. to adopt that method of making his invention known to the public could possibly exist at the present day. There is no more probability that there will ever be a radical change in the present system of bee-keeping than there is that the farmers of this period of time will in the future grow their corn and wheat with the "other end" down; so much faith do I have in Mr. Langstroth's system. Of course we must have improvements to keep pace with the progressive age, but they will only be improvements, not radical changes.

I have worked in the apiary this season with renewed interest and pleasure, and Dr. Miller's little book has contributed somewhat to this state of things. The season so far—June 5—has been moderately good, though we have had very cool nights for nearly ten days past. This has given me the opportunity to test several new devices now under trial in my apiary. A plan to operate a queen-nursery heated by two strong nuclei has been a hobby of mine for some time, and the very changeable weather we have had of late has put the device to the severest test. Night after night the temperature has gone down to 50°—and one night to 44°—and with this severe trial my new queen-nursery has performed its part admirably, hatching the cells with promptness.

The new queen-nursery is made like a common Langstroth hive, but wide enough for a wire-cloth department in the centre that will hold three or four combs, and room for two four-frame nuclei, one on each side of the wire-cloth department. It is so constructed that either of the departments can be opened without interfering with the others. The nuclei are kept crowded with bees and furnish plenty of heat for all practical purposes; besides, they are engaged in nursing queens all the time; thus I heat my nursery as nearly as possible without cost.

A frame of 18 nursery-cages hangs in the nursery, and the young queens as fast as they hatch are introduced to nuclei, if they are ready for them; if not, they are transferred to the cages where they are kept until the nuclei are ready for them.

I had quite an interesting experience the other day in connection with the queen-nursery. While I was absent from the apiary a short time a young queen hatched and proceeded to bite the top off of a cell, leaving the white back of the nymph exposed to view. I removed her before she could sting her victim. I just left the cell as it was, and to my surprise the young queen matured all right, and was as lively as any of her sisters.

Christiansburg,♁ Ky.

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☞ **The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.**

H. D. CUTTING, *Sec.*

For the American Bee Journal.

Our "Union" for Defense.

JAMES HEDDON.

Upon reading the report, on page 357, of this yet "young" and small organization, I felt that we were lifted one more notch in the scale of dignity to which our pursuit belongs. I realize that the day is nearing when bee-keepers will be credited for the ardent work they are now doing to bring the honey product before the public, and also for defending the rights and privileges that justly belong to them.

Being confident that even a majority of the members of this Union do not realize all their rights, I will give my views, hoping that it may help to enlighten them on the subject:

The history of any country where one phase of politics or religion overwhelmingly swallowed up all others, shows that the people long associated therewith, became incapable of discerning what were the natural rights of the small minority. This same elementary principle is to-day bearing against the natural rights of bee-keepers. Very many lines of legitimate business, as well as legitimate pleasure, necessarily carry with them more or less annoyance to the neighbors thereof. Our wealthy neighbor's horse stable will occasionally waft a disagreeable odor into our open door. Mr. Brown's saw-mill whistles are disagreeably loud, and attract our children into dangerous places, besides presenting a cluttered and uninviting scenery. Railroads necessarily come too close to many dwelling houses to be pleasant, and thus depreciate the value thereof. And so we might go on, until the dullest intellect could not fail to plainly see that in nearly all of our relations with each other, compromises are not only right, but absolutely necessary.

Acknowledgement of this fact is universal among our people, regarding such kinds of business as are frequently met with. We have learned that we must respect that calling which supplies its follower and his family with the necessaries of life, and helps in furnishing mankind at large, a greater variety of these necessaries. Certainly, both custom and law protect such industries, overlooking annoyances arising from them, and further, lending substantial encouragement to them. All who vote for the laws protecting these industries do not comprehend the principle of justice in such laws; perhaps very few do; but they realize on a broader and more selfish basis that interest demands them. The farmer, standing at the base, is the honored and protected of all. Injure his calling and you injure all; destroy it, and we all perish together.

Honey has been a luxury; bee-keeping one of the unimportant side-issues. Honey-producing, as a business, is yet an infant. The general public have scarcely yet heard of its birth. It has not yet become old enough, or large enough, to command the respect it deserves.

I presume that the laws against stealing and murder were not enacted because of any keen sense of right and justice existing within the minds of the originators, but because they seriously objected to parting with the results of their labor, without receiving an equivalent, or to being killed. So it is with our young, little, minority pursuit. We will not be respected until such respect is enforced; and no one will enforce it, if we do not. The National Bee-Keepers' Union is the speaking trumpet through which we are to be heard and felt.

As carefully as we would avoid usurping the rights of others, we will as determinedly maintain our own. We do not ask for charity, we ask for *justice*. So illy respected have always been the rights of minorities that I have heard, even bee-keepers, make statements showing that they did not realize how far their natural rights extended.

If a neighbor's wife is canning fruit, and the odor attracts, daubs and scalds your bees unto death, you must not ask her to desist in that which destroys your property, but *you* must buy wire screen to put over her windows to keep out your bees for a few days (and flies for a few months). If you do not, she will ask you to move them into the country, and when your country neighbor's wife begins to boil cider, she will ask you to move them into the realms of space. Some women, and some men too, are not so exacting; they say, "If you don't keep your bees away from here, they will get scalded."

Bee-culture is new; it is respectable, but not respected. The same neighbor has a little worthless, snapping poodle-dog; in your back yard you have discovered a rat-hole. The yard is yours, the rat-hole is yours, and the rat belongs to nobody else (but you wish it did), and you take some of your arsenic, and some of your meat, and place it on your own land close by the entrance to your own rat-hole, to destroy that rat, in order to save valuable property that it is destroying. Now this neighbor says, and the law says, that you shall not leave this poison where it may tempt his dog to destruction. Dog culture is old; it is respected, but not always respectable. There are many more people directly interested in dogs, than in bees. It is not a question of good sense or justice, but of majorities; of habit.

Some jealous neighbors say to bee-keepers, "You get your crop from others' land." But we do not harm the owner of that "others' land," by so doing. We benefit him by our bees fertilizing his blossoms. But, friend and neighbor farmer, why do you raise and plow under red clover? "Because it is a great fertilizer." How so? "Well, in its growth it receives only 15 per cent. of its substance from my ground, the other 85 being absorbed from the atmosphere." Ah! from whence does the atmosphere receive its substance? "Oh!

from other ground, of course." Well, we *all* borrow from each other, after all, don't we?

I tell you, brother bee-keepers, this is a question of vital importance to us all. I feel that in my past season's production of nearly eleven tons of honey, I have come honestly by it; that I injured no person's financial interest in collecting it; that by so doing I became a public benefactor; that I brought into use that which otherwise would have remained useless to mankind; that I did my little mite to make my family comfortable and happy; and, on a broader scale, aided in enriching my city, my county, my State and my country; and while doing this, any and all annoyances arising from my business were far below the average arising from other avocations.

We shall finally receive the rights and respect that we deserve; and soon, if we band together and demand them. This we have done, and are still doing, but we cannot do so too fast. Our Union should now number by thousands rather than hundreds. Finally it will number by thousands, and why not now? Let us at once protect our legal rights, and the dignity of our calling. Let us all join the Union.

Dowagiac, ♀ Mich.

Read at the Johnson Co., Ind., Convention.

The Bee of the Bible.

PROF. C. H. HALL.

The bee is an accompaniment of civilization. Among all peoples of culture the limpid honey is a luxury of the table. The honey of Hymettus, in old classic Greece, is famous in prose and in song, and among the old Romans it was regarded almost as essential as bread is with us. Egypt, and the valley of the Nile—the land famous for its rainless seasons and its majestic pyramids—brings to us the same story of valued sweetness culled from flower and fruit by the restless bee. But the land of whose honey and whose bee we wish to speak at this hour, is the country dear to every Christian heart—the Holy Land with its Jordan and its Galilee—with its cliffs and its valleys, with its prophets and its priests, with its kings and the Christ.

The word "bee" occurs but four times in the Bible, so far as the writer is aware, but the word "honey" is of frequent occurrence. It must be remembered, however, that honey is often used to designate a syrup made from the juice of grapes, boiled down and clarified, and very acceptable to the taste. The sweet and quaint old name of Deborah is simply the Hebrew word for bee, and is translated in our language. One Deborah was the nurse of Rebekah, the wife of Isaac; another was a prophetess who judged Israel and sang the loftiest songs of patriotism and piety. In three out of four places where the term "bee" occurs, it is used to symbolize an overwhelming and destroying foe—indicating clearly that in those olden times the bee was such in disposition as it is to-day. Moses, in giving a detailed account of the wonderful dealings of God with the children of Israel, their blessings and their scourgings, says: "And the Amorites, which dwelt in the mountain, came out against you, and chased you, as bees do, and destroyed you in Seir, even unto Hormah." How vivid is the picture thus briefly given to him who has plunged desperately and blindly through lilac hedge and rose-bush to escape the fierce assaults of two or three vindictive bees. To such an one at least the interpretation of this verse of scripture affords not a difficult task.

The prophet Isaiah, in one of his splendid pictures of the future—a picture of promise and of threat—says: "The Lord shall hiss for the fly that is in the uttermost part of the rivers of Egypt, and for the bee that is in the land of Assyria. And they shall come, and shall rest of them in the desolate valleys, and in the holes of the rocks, and upon all thorns, and upon all bushes." Here we have a most vivid picture of how their land should be over-run by foreign hosts and armies, under the imagery of swarms of bees filling the valleys and the clefts in the barren rocks, and even the useless thorn-tree and shrub.

The Psalmist, on one occasion, while magnifying the kindness of the Lord in delivering him from danger and distress, speaks of the nations who compassed him about, in these words: "They compassed me about like bees."

In these passages which have been quoted, it is plain to see how deeply upon the mind of prophet, poet and lawgiver the characteristics of the bee have stamped themselves. The bee represents resistless fury and countless hosts, and is, therefore, the symbol of a conquering foe.

One of the most perplexing riddles ever given for a foe to solve has its origin in the toil of the bee. "Out of the eater came forth meat, and out of the strong came forth sweetness," for three days perplexed the thirty Philistine guests of Samson beyond measure, until they threatened his wife's house with flames if she did not secure the answer for them. She wept and intreated him in vain for his solution until the seventh and last day of their feast, when wearied with her tears and importunities, he told her of its meaning. On a journey he met with a lion, and unarmed though he was, by the resistless strength of his naked arms he destroyed it. Returning along the same path, some-time afterward, he found that a swarm of bees had established themselves among the bones of the dried carcass. He took the comb laden with its refreshing sweetness and ate of it, and also gave to his parents. This incident furnished the occasion for the riddle with which he so much perplexed the Philistines.

In a rare old book of travels, by Clarke, an account is given of how the people of Cyprus hive their bees and collect their honey. He says: "They build up a wall formed entirely of earthen cylinders, each about three feet in length, placed one above the other, horizontally, and closed at their extremities with mortar. This wall is then covered with a shed, and upwards of 100 hives may thus be maintained within a very small compass. This description is of interest on the present occasion because of a note added in which he further says: "The bee-hives of Egypt and of Palestine are of the same kind. 'Those of Egypt are made of coal-dust and clay, which being blended together, they form of the mixture a hollow cylinder, of a span diameter, and as long as they please, from 6 to 12 feet; this is dried in the sun, and it becomes so hard that it may be handled at will.'"

Such hives as these just described were of course for the tame bees. From some accounts which reach us it would seem that they who managed bees in Palestine and other lands in olden time controlled them more easily than we do. The expression of the prophet, about "hissing the bee," refers to their custom of guiding them by some sound of the voice, either a hiss, a whistle, or a cry. One of the old writers thus speaks of their customs: "They who kept bees were able to draw them out of their hives, and conduct them into fields, and bring them back again, with the sound of a flute or the noise of hissing." Another says: "When they are disposed to fly away, their keepers make a musical and harmonious sound, and that they are thus brought back as by a Siren, and restored to their hives."

The land of Palestine, moreover, was the home of multitudes of wild bees. The warm valley of the Jordon, so far below the level of the sea, with its flowers and its fruits, with its living springs and its burdened vineyards, furnished an abundant pasturage. They built their combs in the clefts of the rocks, old trees, and wherever a vacant space could be found, as in the bones of the slain lion. Palestine, therefore, was a land, of which it was often said, "flowing with milk and honey."

While the word "bee" occurs so few times in the Bible, the product of the bee, under the names honey and honey-comb, is mentioned more than 60 times. In at least 17 places the country is called "a land flowing with milk and honey." Under these figures of speech there is emphasized that fact that the country shall produce abundantly the necessities and the luxuries of life. By milk, the necessities of life are suggested, as it contains every needful element for the healthful growth of the body; by honey, the luxury and joy and beauty of life are indicated.

Solomon, in advising the young, says: "My son, eat thou honey, because it is good; and the honey-comb which is sweet to thy taste." He chooses this luxury of the table, however, to illustrate a moral lesson. For he further continues, "So shall the knowledge of wisdom be unto thy soul." Here is seen a glimpse of the high estimate placed upon honey; as is honey to the appetite and taste, so is the knowledge of wisdom to the soul. That a good judgment should be exercised in eating so delicious and rich a viand is seen in a caution of the same writer: "Hast thou found honey? eat so much as is sufficient for thee, lest thou be filled therewith, and vomit it." The same caution points a moral in another place where he says, "It is not good to eat much; so for men to search their own glory is not glory." Again he says: "Pleasant words are as an honey-comb, sweet to the soul, and health to the bones."

As much as honey was esteemed by the prophets and poets, yet it was forbidden to be offered in the meat-offerings of the religious services, "not because bees were unclean, for a tithe of honey was on one occasion paid to the priests, but either because it so quickly soured, or else because it emitted an offensive odor when burnt."

In conclusion, two interesting facts are indicated—one, that he who came as the announcer of the Messiah came eating locusts and wild honey; the other fact is that so far as we know the very last meal that the Messiah ate to prove to his disciples that it was he, risen from the dead, was fish and honey comb. "And they gave him a piece of a broiled fish, and of a honey comb. And he took it and did eat before them."

Read at the N. Y. State Convention.

Reversing Hives, Frames and Sections.

J. M. SHUCK.

For the purposes of this essay, it is assumed that the normal condition of a colony of bees is that in which the members are constantly increasing, and that it is at its best when in this condition. "Keep your colonies strong," is an old adage, and as good as it is old.

The invention and introduction of the movable frame advanced the study of bees hundreds of years at a single stride. The object of these frames was the control of the combs so that we might see what was taking place in the hive. No one supposed that more bees could be reared in these frames than in the trunk of a tree. They were mainly considered excellent because swarming could be controlled, colonies increased at pleasure, and because queenlessness might be prevented. By and by it began to be observed that certain manipulations of the frames stimulated brood-rearing, and that rapid increase of bees was the result. It was also observed that bees entered the surplus boxes more readily when placed in close proximity to the brood in the hive. So important did this idea become that numberless devices were offered that proposed to effect this object. Hives were so made that boxes could be placed adjoining the sides of combs full of brood. Triangular frames were invented which offered two surfaces for boxing, and square frames were hung at opposite corners so as to furnish the desired boxing space near the brood. In all these hives the same features presented themselves, to-wit: brood in the upper part of the frame at the time when putting on the boxes; later, brood in the lower half of the frame, and honey in the upper half and between the brood and the boxes. The increase of the colony was checked, its numbers began to grow less, and the storage of honey diminished. Another idea here introduced itself—"contraction." Taking it for granted that brood-rearing must be checked, it was the most natural thing in the world to force the depleted colony into the boxes by lessening their space below. It was a most common experience to have storage cease while the secretion of nectar was yet abundant; it was a cause of complaint everywhere.

The invertible hive seems to meet most of the difficulties in securing storage of honey as long as the supply lasts. In early spring the hive is set on one end, giving a vertical depth in the brood-nest of about 18 inches. The upper end of the brood-chamber being the warmest, brood-rearing is carried on their first until the upper end of the brood-nest is occupied with it. Then as the weather gets warmer, turn the hive the other end up when *it* will soon be occupied with brood. This takes us to May 1. Now turn the hive down on the stand in the position that it is to occupy during the harvest, then within ten days turn the other side up, and ninety-nine times in a hundred that colony, if it had a fair supply of bees, and a good queen to begin with, is ready for profitable work. From May 25 to June 1 in this locality, is the time to put on sections, taking care to invert the hive first before putting on the cases. This places the cases nearest the brood and emerging bees, and always secures the best results.

When it is noticed that the sections are getting nicely filled, and combs extended so that they are strong enough, it is time to invert the cases. These cases should be so made that they touch the queen-excluder only around their edges; made thus, they may be detached and lifted off with almost the facility that a man may handle a bucket of water. To invert the section-cases, take them off and set them aside; take off the queen-excluder, and then put on the top-board with the entrance open to the rear; attach the hive-lifter and invert the hive and set it down quietly in the same place it occupied before; no bees are crushed because the hive is not set down *on the bottom-board*, but the bottom-board is put on top before inversion, and all turned together; now take off the top board, replace the queen-excluder, put on a fresh case of sections, and on top of it place the case first put on, but in an inverted position so that the sections may be filled out plump to the bottom-bar as well as the top. So perfectly does the brood-rearing keep pace with storage that, as a rule, the hive should be inverted every time a new case of sections is put on.

The reading of the above seems a long process, but five cases of sections may be removed, the hive inverted, and all replaced inside of five minutes. In a word, the invertible hive should be so made that it can occupy four different positions. The cases should be so made that they will hold the sections true and allow the bees to touch them nowhere only on the inside. Without separators, full sheets of very thin foundation should be used. If separators are used, starters will answer.

There is but little to say about reversible frames. Even fastidious people reject "two bites to a cherry," and eight to ten or twelve bites would be incomprehensible. "All the frames at once" is the demand of the times, but they should be made so that they may be removed if necessary to be examined for any purpose; and the hive containing them should be constructed so that the frames may be removed when either side is up.

Des Moines, Iowa.

For the American Bee Journal.

The Bee-Keepers' Repository.

M. M. BALDRIDGE.

As the AMERICAN BEE JOURNAL seems to be a repository for historical facts relating to bee-culture, I desire to place on record therein what the late M. Quinby thought of the Langstroth hive after having used the same *three* seasons. His views, as now presented, have never, to my knowledge, appeared in any bee-paper—having been prepared for and published in the *Rural New Yorker* some two years before the AMERICAN BEE JOURNAL made its advent. To those engaged in discussing the merits and demerits of new hives, Mr. Q's experience with and criticisms upon the Langstroth hive will, I think, be interesting reading. And now, without further comment, permit me to introduce the reader to

Bees and Bee-Hives—My Experience.

BY M. QUINBY.

In 1856 the Rev. L. L. Langstroth brought to me his movable-comb hive, with a request to test it and report the result. I saw at once that by controlling the combs, and consequently being enabled to inspect the interior of the hive at all times, was something not offered by the common hive. He enumerated over fifty advantages that his hive gave over the common one. Although I could not discover quite so many, yet I thought I could see enough to pay me, at least, for the extra expense of construction. Near the first of May I transferred the bees, combs, honey, etc., of some half-dozen hives into the frames. I did not expect, neither could I discover that the bees worked "more vigorously than before," but they worked well, however; some swarmed naturally, others I made to swarm artificially, and second swarms were prevented effectually.

In 1857 I made nearly 100 hives on this principle, and put bees into them, which worked quite satisfactorily. The present summer (1858) I have used a large number. But a difficulty has arisen that I was not prepared for, viz: *crooked combs!* Last year, among the whole number, there was but one hive of them so crooked that they could not be taken out, yet there were a great many of them not perfectly straight. This year two-thirds of the swarms that have been put into empty hives have made combs in every possible direction, without regard to the bars, making them, so far as movable frames are concerned, no better than the common hive. The cause of this I have not been fully able to determine. Last year the bees gathered honey very slowly, this year very fast; probably this has some effect. A little more experience will decide.

Last season I had a great many combs made with but little or no honey stored in them; this season I have used them for swarms, putting two or three into a hive—two or more empty frames between those with combs. Even here, although they have followed the frames with their combs, some places are so very thick, and others so thin, that it is extremely difficult to raise them out. I did not expect to find these difficulties with this hive. A few weeks ago—before the present swarming season—I should have told the story somewhat differently. Even now, with all the uncertainty of the directions in which the combs are built, there is a class of bee-keepers who *may* make this hive pay—such combs as are not built straight can be made so by the fearless operator. But the bee-keeper who has not the energy to prepare himself to take off the top of his hive, and open the door for thousands of perhaps angry assailants to attack him; and the ignorant one, so totally unacquainted with the nature of the bee, that he could not tell what he wanted to take out the combs for, *had better adhere to the common hive,* because without making the frames available as intended, they are worse than useless, also money and labor thrown away. The man who has not much time or patience to bestow on his bees, who pays for a patent, wants it to work right at all times, without depending on the caprice of the bees; and when those interested in the movable frames can *improve* the patent with a plan that will make straight combs in all cases, with some other minor improvements, it will do much better for the common bee-keeper.—St. Johnsville, N. Y., 1858.

By all means let us have the foregoing on record where it will not become lost.

St. Charles, ♁ Ills.

☞ The 5th regular meeting of the Hill County Bee-Keepers' Association will be held on the first Tuesday in July, 1886, at the apiary of Hon. J. M. McDaniel, of Peoria, Tex. At the same time and place will be held a bee-keepers' honey picnic.

H. A. GOODRICH, *Sec.*

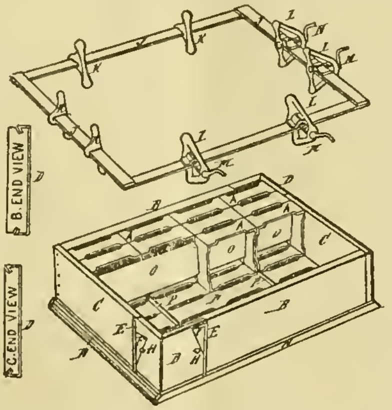
Rays of Light.

Adjustable Honey-Case.

OLIVER FOSTER.

This case has been in practical use in my apiaries for the past two years. While it meets the long-felt need of a case press, and holds the sections compactly together on all sides, with no spaces nor partitions between them, it is cheap and simple, and is easily and rapidly handled.

It is made of four boards as wide as the sections are high. The case is nailed at two diagonally opposite corners. The boards are mitred at the other two corners, and are clasped together by the folded angular tin plates (D), the edges of which slide in saw-kerfs in the board as shown in the engraving, at the left. These tin corners allow the case to open half an inch larger both ways, and hold it rigidly whether opened or closed. The case when closed is a little smaller than the tier of sections. It has no bottom-board, and it is the same, either side up.



To fill it with sections, place it on a level board; open it out, arrange the sections inside, then draw them into position by pressing the case together. Now slip the light wrought-iron clamp (J) over it, and by operating the screws (M), draw it tight on the sections. Now slip in the tin wedges (F), under the tin flange (E), and the nail head (H), to hold the case from spreading. Remove the clamps and the case of sections is ready to place on the hive.

The cases are easily and quickly tiered up or may be inverted if desired. The tiers are always in perfect contact with each other, and with the honey-board below. These cases are admirably adapted to use without separators, but any number of long separators may be used in them, from one to the full set, by simply dropping them in between the rows of sections, as shown at O. They rest on the edges of two strips of tin (P P), which pass between the rows of sections crosswise at the bottom. These narrow strips are held in place like the sections by the lateral pressure of the case. The clamp is not a necessity, but very handy while filling the case or taking them off the hive.

Mt. Vernon, ♂ Iowa.

For the American Bee Journal.

The Cold Weather in Florida, etc.

BENJ. FRANKLIN.

I have just read the article by Mr. John Y. Detwiler, of New Smyrna, Fla., on page 343. One year ago last winter I was at Mr. Detwiler's house, and I believe what he writes is the truth. I was at Lake Worth through the great freeze of last Jan. 10, 11 and 12. I boarded some 3 rods from the lake, and on the morning of Jan. 12 I picked up fish enough in a few minutes to fill a one-half barrel. After they were dressed they would weigh from 2 to 10 pounds each. There was barrels of fish scattered along the shore. I picked up some that were alive, but could not help themselves on account of being so chilled.

I was nearly 200 miles farther south than where Mr. Detwiler lives, and I did not see any frost nor ice while there; but some said that there was ice on the west side of the lake near the fresh water. But I saw that the top leaves of the morning-glories was touched by the frost, and some on the sweet potato vines. Tomatoes were not frozen where I was. But up at the north end of the lake it looked as though the frost had frozen the cocoanut leaves some. I thought that it was a sight to see the fish along the lake, but when I got up at Jupiter Inlet, in Indian river, they were so thick along the shore that it was hard work to walk and not step on fish along the edge of the water, and so it was for a great number of miles up the river. The vessel passed through acres and acres of floating fish, and the water looked white with them. The water was very clear and shallow, and I watched for miles and miles, but I could scarcely see a live fish.

There were 12 or 13 colonies of bees at the Lake. I examined some of them on Nov. 22, 1885, and took out some honey. It was quite yellow, about like our raspberry honey here. I did not like the flavor of it. The bees work on cocoanut bloom all winter, or every day that it is warm enough. There were quite a number of cool days while I was there that they did not work. If bees can get much honey from cocoanut bloom, then Lake Worth will be a good place for bees, as there are a great many cocoanut trees coming into bloom every year.

There are no mangroves around the lake, but some 20 miles north, at Jupiter Narrows, there is plenty of the red mangrove. I saw some black mangrove at Jupiter Inlet. As I came through on Jan. 16, 1886, the red mangrove was in bloom on some trees. The river is so narrow in some places that the mangrove caught the sails, and our vessel got crosswise of the channel. We had to use an ax to cut the limbs out of the way.

Further up, opposite Indian River Inlet, I saw plenty of the black mangrove. It looked as though the frost had touched the leaves. I know that the mangrove honey cannot be excelled, as a year ago last winter I boarded at New Smyrna, where they had eleven barrels of it. The candied honey looked like white sugar, and I liked it better than sugar to put into coffee. I must say that it is lovely in Florida in the winter.

I lost 25 colonies out of 100, this spring. The ones I buried I have lost the most of. I have got enough of burying bees, for the present.

Franklinton,♂ N. Y., June 2, 1886.

Pacific Rural Press.

Production of Comb Honey.

WM. MUTH-RASMUSSEN.

Although comb honey is now sold cheaper than ever before, it will always remain more or less a luxury, and it is somewhat to the interest of the producer to keep it so, by presenting it to the public in the most convenient and most attractive shape. The old-fashioned way of offering for sale a whole capful of honey, built in irregular shape,is past. Nobody wants so much at the time, nor wants to be bothered by the dripping and daubing consequent upon cutting out piece after piece, not to speak of the difficulty of keeping it protected from dust and insects. Neither is the fashion of putting comb honey into tin cans or glass jars and surrounding it with liquid honey a proper way of doing it.

The comb honey of to-day is produced in small square frames, called sections, weighing, when filled, from one-half to two pounds each, according to their size. Of these, the one-pound section is the most popular and most common in use. The regular Langstroth wide frame holds eight of these one pound sections, while the "three-quarter Langstroth," or crosswise Langstroth wide frames hold six sections each. This is the style I use.

In order to compel the bees to build the combs of an even thickness and weight, and to prevent them from bulging the surface of the combs, which would cause them to rub against each other and leak, when packed for shipment, two strips of tin, called separators, are nailed on one side of each wide frame. These separators are not wide enough to interfere with the free passage of the bees into the sections. To start and guide the bees in building their combs, a piece of thin comb foundation is fastened under the top side of each section. In my experience it is a mistaken economy to be saving with the foundation. I use full sheets, coming within ⅛ inch of the sides, and ¼ inch of the bottom of the section, and after one year having had nearly all my sections below weight, because I only used narrow strips of foundation as starters, I shall never again use less than full sheets for that purpose.

Some bee-keepers succeed in producing straight combs without separators, but as it requires an extra amount of care, and is by no means a sure thing, there is no doubt that the majority will prefer to use separators, even if they add a little to the expense of the outfit. The comb foundation is fastened in the sections by means of a small implement, called the "Parker foundation fastener," or by some similar device.

When the sections are filled the division-board is removed, and frame after frame lifted out. The sections are taken out of them and new sections inserted in their place, as long as their is a prospect of getting them filled. The sections are then taken to the honey-house, where they are cleaned of propolis, assorted, labeled and packed in cases for shipment. Some bee-keepers pile the sections in a small, close room, or in a large box and fumigate them at certain intervals with brimstone, in order to kill any moth-worms which may hatch in them ; and where there is a large crop, which it may take considerable time to dispose of, this is probably the best way.

Independence,♂ Calif.

Local Convention Directory.

1886. *Time and place of Meeting.*

July 6.—Hill County, at Peoria, Tex.
H. A. Goodrich, Sec., Massey, Tex.

July 16.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls,Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis,Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Fine Season So Far.—R. L. Moore, Boonville,⊙ Mo., on June 8, 1886, says:

We are having a fine season here for bees. I had 10 colonies in winter quarters, and they wintered well. All have swarmed; the first two swarms were cast on May 19 ; the last on May 30. I mean prime swarms, as I return all second swarms to the old colonies. I have taken about 100 pounds of surplus comb honey, and have over 150 pounds now being capped, with 500 sections being worked in. Have taken 49 pounds from one hive up to this date. White clover is in abundance. I now have 18 colonies, having sold two swarms, and I expect to get 600 pounds of comb honey ; and if the season continues for one or two months yet, I will expect 1.000 pounds of surplus comb honey.

Storing Honey—Swarming.—Noah Field, Spencer,♀ N. Y., on June 7, 1886, writes:

I had a large swarm on June 1. I put a box on the parent colony when I took them out of the cellar, and it is about full of honey. The box will hold 8 or 10 pounds. Yesterday there was a large swarm settled on the slanting bottom-board of a new empty hive, that I had placed in the end of the wagon-house for the next swarm, and it is now half full of bees.

Bees Doing Well.—J. W. Sanders, Le Grand,⊙ Iowa, on June 10, 1886, writes:

So far we have had a fine season for the bee-work. All report that bees are doing well for so early in the season. The white clover is now coming in its prime, and bids well for a great yield of honey, for the crop is immense, and of large growth. The weather is now dry and hot, but generally heavy dews.

Sour Honey.—B. Losee, Coburg, Ont., on June 7, 1886, writes:

On page 346, L. Reed says: "On May 7, upon going into the bee-yard I noticed bees on the outside of several hives, and the ground literally covered with bees crawling in every direction." His bees were over-fed with sour honey. I found the same effect after feeding granulated honey made into syrup, fed outside the hive. Some colonies became perfectly demoralized, as it were. Some of the bees remained out all night, but most of them recovered the next day without any bad effect, apparently.

Good Prospects.—W.B.McCormick, Uniontown,♀ Pa., on June 8, 1886, writes:

We are having the greatest honey-flow ever known in this county. White clover is in full bloom, and very abundant. The weather is all that could be desired. I had 4 swarms yesterday, making 28 in all. The bees seem perfectly crazy. I wish I knew how to prevent so much swarming. Tiering-up does not seem to have any effect. Some of my first swarms have their boxes nearly filled. I took off some very fine two-pound sections yesterday. I think I am good for 1,500 pounds this season.

Bee-Keeping in Nebraska—Ants.—4—Henry Patterson, (40—39), Humboldt,∽ Neb., on June 1, 1886, writes:

To-day our hearts are delighted with the hum of the bees, as they bring home their mighty loads of sweets from the clover. Nebraska is destined to be to the Union as June is to the year. Persons that never were in the West cannot picture the beauty of this country with its boundless prairies tilled by the most energetic farmers of the country. The honey resources are not yet thoroughly tested, but so far as tried bee-keeping has been very successful. We have no natural forest to aid us to any extent, except on the Missouri river. If our bees can make their living until August we are thankful, as our honey-flow is from heart's ease, which opens about Aug. 10. White clover does well, but the area covered by it is so small that it adds but little. So far the season has been good. A fine fruit-bloom followed by flowers of many kinds has kept our bees booming; but June is the hardest month with us. Red clover is in bloom (and plenty of it too), but the bees do not work upon it. When we get something to supply the bees in June and July, that they may be ready for the honey-flow, we can weigh surplus with any State, and the quality is hard to excel. I will say for the benefit of those whose apiaries are troubled with ants, that I have been very successful with the use of kerosine, by using it on the bottom-boards and corners of the hives, and some on the cushion or cloth.

Starch Sugar in Honey.—Dr. G. H. Kidney, Birmingham,⊙ Ala., gives the following test:

Hager (*Jour. Chem. Soc.*) proposes the following test for the presence of starch sugar in honey: Dilute the honey with 3 volumes of water, and filter; introduce 4 c. c. into a test tube, add 6 drops of a 10 per cent. solution of mercuric nitrate, then 4 c. c. of absolute alcohol. If the honey is largely contaminated a precipitate gradually falls, on standing; but there is only an opacity with small proportions. Hager also finds that if some of the solution of honey is put into a test tube and alcohol poured upon it so as to form an upper stratum, the development of a milky opacity at the line of contact indicates the presence of sugar.

Plenty of Clover, but no Honey.—A. W. Cumins, Woodstock,♂ Ills., on June 10, 1886, says:

I put my single colony into the cellar last fall, and put it out this spring all right. It has done well, and yesterday it cast a large swarm. I had left the case containing 24 one-pound sections on the hive all winter, and last evening I removed it; I found all the sections filled more or less with drone brood sealed, but I got about 15 pounds of honey out of it. I notice that many correspondents speak of the abundance of white clover, and seem to imagine that the bees are storing lots of honey from it. I can bear the same testimony to the growth of clover, but I have not been able to detect a bee working on it, which has been my observation in wet seasons. There is no honey in it yet out here, but if the weather continues dry for another week I expect to see a change in that respect. The swarming season is about two weeks earlier than usual, and the absence of honey in the clover is the only drawback that I notice.

Florida Bee Territory. — L. J. de Sobotker, Riverton,⊶Miss., writes:

I wish to call the attention of Messrs. Hart and Detwiler to the fact that New Smyrna and Hawk's Park are not situated in central (⊙) Florida, but on its east coast, with only a strip of land separating them from the Atlantic Ocean. Mr. D. lives on this strip of land, and Mr. H. on the main side further south. I beg to correct this, as it may lead apiarists astray, as I was led last July when I visited them in search of a location for bee-keeping. As far as my inquiries and information received about that part of Florida, I think that Mr. Detwiler's statements are correct in his articles. All extensive landed proprietors there are constantly seeking to run Florida and its resources "up to the skies." I happened to ask a pretty old inhabitant of that musquito and sand-fly region how the people make a living in general. The answer was, "Why, in summer we live by fishing and hunting, and in winter we live on sick Yankees; that is, while we are getting an orange grove established, which takes some years, and just now the only ones doing anything around here are the bee-keepers, of which there are several, and I think Mr. Hart is the most extensive in both bees, orange groves and lands among them." I have written this as I think "fair play is a jewel." We have right here plenty of musquitos and sand-flies, but not as bad as that part of Florida.

[Both are in Volusia county, and the United States Postal Guide marks that county thus :.⊙; though it would be more correctly marked thus, ⊶. We follow the Postal Guide for marking localities, as we do Webster's Dictionary for spelling and defining words. Sometimes, it is true, both may be improved a little.—Ed.]

Bees Not Ready for the Harvest.—C. W. Dayton, Bradford,♂ Iowa, on June 3, 1886, says:

In this locality the bees are at least 15 days behind vegetation. The colonies in my apiaries will average about 7½ combs of brood, and the fields are white with clover blossoms. This season there has been lots of warm weather; but there has been cold also, so that the bees built up slowly. Since May 25 it has been so warm that brood-rearing fairly jumped. I have noticed some colonies containing 7 combs that are almost solid sheets of brood, only two of which combs contained brood old enough to cap. This morning there was a heavy frost. Last evening I covered thickly with hay the colonies whose brood-combs were the most recently spread, so I think there will be no brood destroyed. Some of our clover harvest must be used in building up the colonies. I never knew but one honey-yield to last until Aug. 1, so our prospects are not very satisfactory.

Are Bees a Nuisance?—Thomas and Benjamin Young, La Salle,♂ Ills., write thus on June 10, 1886:

We were taken before a Justice of the Peace last Tuesday to answer a complaint, made and sworn to, that our bees are a nuisance. Our neighbor lives at least 550 feet west of us, but passes our place to get to the main road. Our bees are 25 feet from the narrow road (2 rods), and 150 feet from the main road. When our neighbor came home for dinner on that day there were two swarms in the air, and he drove through them and got stung "all up," as he puts it. We have no fence on the south side of our lot (one acre), and we do not know whether that would go against us. We had him agree to be satisfied if we would put up a fence about 5½ feet high. Now, what we want to know is, have we any rights as bee-keepers, and what are our rights? If we have to put away 55 or 60 colonies of bees because a man got stung while driving through two mixed up swarms, it is all up with bee-keeping.

Open Questions.—O. P. Miner, Taylor Centre,⊙ N. Y., asks the following questions. Any one may answer them who feels competent, through the Bee Journal:

1. Is there any piping of queens ever heard while the old queen is in the hive, and before they swarm?

2. Are virgin queens ever hatched before the old queen issues with the first swarm?

3. If so, do they ever go with her and the swarm?

The following circumstances suggests these questions: On May 23 my first swarm issued, but returned to the parent hive after my trying to hive them in a new one, which they were loth to enter. At the time they had a queen-cell sealed. For several days following it was cold. On the morning of June 4 I found a dead queen in front of the hive. I listened at night and heard piping. The next day—June 5—I opened the hive and found larvæ 4 or 5 days old, but I did not discover any eggs. On May 30 another swarm issued (from another hive), and in hiving them I saw three queens. Upon opening this hive I found nothing but sealed brood and honey. Perhaps in this case the old queen was superseded.

☞ **Sample Copies** of the Bee Journal will be sent free upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

Foundation, Cheap.—We have about 75 lbs. of Comb Foundation for the Brood-Chamber, 4x16½ inches, which we offer at 35 cents per pound. This is an odd-size lot of our regular "Dadant" stock.

◆

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 14, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Honey of all grades sells slowly at present, and prices are weak—14@15c. being the outside figure for best comb honey. Extracted is in light demand at 5@7c. California comb honey, in 2℔. sections, 9@12c.

BEESWAX.—25c. for good yellow.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The first new comb honey of the season—a sample lot of extra choice—brought 14 cts. We quote: White to extra white comb, 11@14 cts.; amber, 7@10c. Extracted, white liquid, 4½@5c.; light amber colored, 4 to 4½c.; dark amber colored, 3½ to 3¾ cts.

BEESWAX.—Quotable at 20 to 24 cts.

O. B. SMITH & Co., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT, Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½. Fermented goods, 2¼@3c

BEESWAX.—Firm at 22c for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—There is an excellent demand for best 1-lb. sections of white honey, and all arrivals sell readily at 14c.; 2-lbs. and glassed sections sell slowly at 12c. Extracted, 7@8c.

BEESWAX.—Scarce at 25@28c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market seems quite dull for all qualities of comb honey, with but a moderate demand for extracted. We quote: Choice, white 1-lb. sections, 17@18c.; the same in 2-lbs., 16@17c.; dark 2-lbs., 15@16c. Extracted, white, in barrels or kegs, 7@8c.; dark, in same packages, 6@7½c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—About 700 cases arrived this week. The market has a soft tone and bids fair to favor buyers for months to come. White comb honey is offering at 9c. Water white extracted was placed at 4¾c., and light amber at 4c. These are extreme figures to realize in the wholesale market for the qualities named, with no prospects of better rates prevailing. We quote as follows: White to extra white comb, 9@10c. Extracted, white liquid, 4¼@4¾c.; light amber colored, 3¾@4c.; dark amber colored, 3¼@3½c.

BEESWAX.—20@24c. in lots from first hands.

SCHACHT & LEMCKE, 122-124 Davis St.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

The Graphic News, of Cincinnati, O., of June 12, is quite extensively devoted to the President's recent wedding. The illustrations—all especially interesting because of their originality—include the representation of the ceremony, the President receiving congratulations, the cottage at Deer Park, where the honeymoon was spent, the car in which the bridal-trip was made, and many other pictorial features of this event. Accompanying the issue of June 19 will be a magnificent colored supplement of "FABIOLA," a reproduction of a famous painting. The souvenir will be a beautiful work of art. None should miss either of these fine numbers of our brilliant contemporary.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

BEES! "I am very well pleased with the 2 colonies of Italian bees. Please send me 3 more.—N. W. McLain."
More cheap. Also Nuclei. **A. L. GOULD,**
24A1t RIDGEVILLE, Iroq. Co., ILLS.

Italian and Carniolan Queens
BY RETURN MAIL.

BRED in separate apiaries away from other bees. Warranted Italian or untested Carniolan Queens, in June, $1.10; 6, $5.90; in July, $1; 6, $5. State which you prefer, **Bellinzona** or **Golden Italians.** For full particulars and prices of Bees, send for Circular. *Satisfaction guaranteed.*

CHAS. D. DUVALL,
24Etf SPENCERVILLE, Mont. Co., MD.

Advertisements.

ITALIAN QUEENS.—Tested, $2. ; Untested $1.00. **MISS A. M. TAYLOR,**
23A2t MULBERRY GROVE, Bond Co., ILLS.

PRICES REDUCED.

TESTED QUEENS $1.25 EACH.—Untested Queens, 75 cents each.

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NEW ONE-POUND HONEY PAIL.

THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,
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AN ILLUSTRATED PAMPHLET just out, by Oliver Foster, describing improvements in methods resulting from 10 years' practical work and extensive experiment. Price, 5 **cents.**

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Address, **OLIVER FOSTER,**
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Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

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FOR Early Italian Queens, Nuclei and Full Colonies; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.,** a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,

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For HOME SEEKERS or Tourists, Capitalists or Laborers. A vast amount of information not to be found elsewhere at any price.

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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of receipes, and much valuable information.

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HOW to MONKEY with BEES

and Price-List of Apiarian Supplies. Sample of Foundation free for your address on a postal card.
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14Etf

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
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Is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows: Single Queen, $1.00 : 6 Queens for $5.00 ; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound). Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.

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6 Warranted Italian Queens

FOR $5; 12 for $9; Single Queen, $1. Sections $3.75 per 1,000.—I. R. GOOD, Nappanee, Ind.
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SECTIONS and FOUNDATION.

1-lb., all-in-one-piece, V-Groove, $4 per 1,000 Less for lots of 10,000

40c per lb. for heavy.
50c " " light.
Send for Samples and Price-List.

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Silver Hull Buckwheat.

85 **CENTS** per Bushel—Sacks included.
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I **WILL** furnish **Warranted Italian Queen-Bees** for $1.00 each; Tested Queens for $2.00 each. Delivered by mail.

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is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping Bathing, Working, etc.

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HONEY JARS, Bee Hives, Sections, Smokers, and Stanley Extractors. Best Quality. Lowest Prices. Send for price lists to **TYGARD SONS,**
23A2t 2119 S. Jane-st., Pittsburgh, Pa.

BEE Hives and Sections.—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t.

ALLEY'S QUEENS.

READY JUNE 1, 1886.

WARRANTED Queens, by mail			$1 00
"	"	" per ½ Doz.	5 00
SELECT	"	" each	1 25
"	"	" per ½ Doz.	7 00
TESTED	"	" each	1 50

By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.

HENRY ALLEY, WENHAM, MASS.
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ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*

9W1y **J. M. JENKINS, Wetumpka, Ala.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

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A YEAR AMONG THE BEES,

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A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

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BEE-KEEPERS' GUIDE;

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25**. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
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QUEENS BY RETURN MAIL.

I AM up with my orders and can send QUEENS by return mail. Capacity, 75 to 100 a week. **Six Warranted Queens for $5.00.** I have the finest breeders I ever had. Also English Rabbits $1 a pair.

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TESTED Queens, (Imported Mother), $1.25 each; $12 per doz.-O. N. Baldwin, Clarksville, Mo.
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PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
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Lewis' V-Groove One-Piece

SECTIONS.

Down, Down, Goes the Price!

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

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WATERTOWN, WIS.

April 15, 1886. 16Wtf

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12A16t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf J. VANDERVORT, Laceyville, Pa.

Bee-Keepers' Supplies,

OF ALL KINDS,

Sections & Comb Foundation

A SPECIALTY.

125 colonies of Bees for sale

in Quinby frames, mostly Italians.

☞ These Bees will be SOLD CHEAP. Send for prices. Also, for Illustrated Price-List.

W. E. CLARK, successor to L. C. Root,
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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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DO YOU EAT CANDY?

SEND $1.25 and I will express 5 lb. Todd's Honey Candies, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's New Book mailed free for $2.50. **ARTHUR TODD,**
1910 Germantown Ave., PHILADELPHIA, PA.
17A10t

TWO-POUND

SECTIONS.

Job Lot—Cheap!

WE have on hand a Job Lot of **20,000** One-Piece Sections with square groove, which we will close out at **$3.50** per 1,000, or $2.00 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

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ITALIAN QUEENS BY RETURN MAIL.

TESTED, $1.00: Untested, 75 cts.
22A3t GEO. STUCKMAN, Nappanee, Ind.

BY RETURN MAIL

Select Tested **QUEENS, $1.50 each.**
Warranted Queens, **75c.** Per doz., $8.00.
Strong three-frame Nuclei, with tested Queen, **$2.50 each.**
☞ All Queens strictly pure Italians. ☜

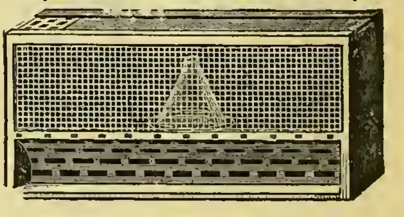
Address, **JAS. F. WOOD,**
20A20t NORTH PRESCOTT, MASS.

One-Piece Sections,

MADE with a ʌ-groove, warranted perfect, 4¼x4¼ and 1⅞ wide—$4 per 1,000. Five per cent. discount on orders of 5,000 and over at one time.

J. P. McGREGOR,
22A3t FREELAND, Saginaw Co., MICH.

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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SEWING MACHINES.

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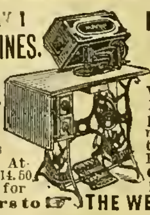
Newest and Best.

Black Walnut, Drop Leaf Table, Cover 3 Drawers and Full Set of Attachments, only $14.50, Cash or **FREE** for **29 Subscribers to** ☞



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Where to Invest Money or find Employment, told in the most widely-circulated paper published. Price $1.00. Send to **CHICAGO, Ill.**, For Sample Copy of

THE WESTERN WORLD.

Carniolan Queens.

HAVING located an apiary of this new race of bees in an isolated place surrounded by high mountains, where a honey-bee was never seen until we placed them there. We have 2 of the finest Queens that Mr. Benton could furnish to breed from; and can furnish Queens of undoubted purity, at the following prices:

June, 1 Queen,	$3 50	6 Queens,	$18 00
July, 1 Queen,	3 00	6 Queens,	15 00
Aug., 1 Queen	2 50	6 Queens,	12 00
Sept., 1 Queen,	2 25	6 Queens,	10 50

ITALIANS bred in a separate apiary 40 miles away; of the best strains, warranted purely mated:

June, 1 Queen,	$1 00	6 Queens,	$5 00
July, 1 Queen,	1 00	6 Queens,	5 00
Aug., 1 Queen,	1 00	6 Queens,	4 50

Address, **J. H. MASON & SONS.**
24A2t MECHANIC FALLS, MAINE.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. June 23, 1886. No. 25.

The Resolutions proposed by Mr. Clarke, on page 389, sufficiently explain themselves. Modesty forbids our endorsement of them so far as they relate to the Manager; the others have our hearty approval. As to the "cane" business, it may "raise Cain," and should not be attempted; the Manager will be abundantly able to continue to "walk straight" without its aid! "United action" is of more importance than any public act of endorsement; harmony and persistent work far more necessary than any token of approbation!

* * *

Mr. D. A. Jones contracted an affection of the eye during his tour in Oriental Lands, some years ago, and it troubles him considerably, causing acute pain and much annoyance to such a "busy man" as he is. His many friends all over the world will be sorry to hear this.

* * *

Rains have been numerous lately, and as the roots of the clover had penetrated deeply into the earth after moisture during the preceding drouth, the bloom is profuse, and honey is being gathered in abundance. Mr. Wm. Malone, of Oakley, Iowa, on the 17th wrote as follows:

> We are having a large crop of white clover honey. I have taken about 900 pounds of honey from white clover from 24 colonies, spring count. The linden never was more promising for a heavy honey yield. The honey is of excellent quality. We feel good over the prospect for 1886.

* * *

Concerning the Wiley Lie about combs being made by machinery and filled with glucose, mentioned by Rev. W. F. Clarke on page 389, as being contained in Appleton's Cyclopædia for 1881, the reader is referred to an editorial in the AMERICAN BEE JOURNAL for 1883, page 209, where we ventilated the matter. We sent a copy and a letter to the Appletons at the time, but they took no notice of it. We will now do so officially, as Manager of the National Bee-Keepers' Union, and will announce the result in due time.

A Correspondent who has but just commenced keeping bees, asks whether the old or young queen goes with the first swarm. As several questions of similar import have been received lately, we will reply to them all at once.

The old queen goes with the first swarm before the young queen emerges from its cell. The old queen is prevented from destroying the young queens by the bees before swarming. Previous to the issuing of a swarm the "piping" or shrill notes of the old queen in answer to those of the young queen yet in the cell, may be heard several feet from the hive. An experienced apiarist knows that a swarm will soon issue. But it is not consistent with the nature of bees for the young queen to hatch while the old queen is present. In some cases, when the bees need a queen to supersede an old or worn-out queen, mother and daughter live together in harmony in the same hive, but this is an exception to the general rule.

* * *

We are Sorry to learn by the *Canadian Bee Journal* of last week that Mr. Frank Benton, who is now in the Island of Cyprus, has an attack of fever. Our Canadian cotemporary adds the following:

> We are also informed that those disagreeable quarantine regulations with which they fumigate everything passing through the mails, has prevented the shipping of queens and carrying on the operations as successfully as they could wish. We hope that these objections may soon be removed, and that friend Benton will recover, so that he may carry on his noble work. Any one who sacrifices the comforts of American life for the discomforts of life in the East, in order to carry on the operation of exporting queens, should not only receive the good-will of every one who desires them, but deserves to have health and prosperity. We fear Mr. Benton will have to abandon the work or sacrifice his life to the climate of that country, as it is not adapted to Americans, and by the time a person becomes acclimated, his constitution would be ruined.

* * *

About Protecting Combs from the ravages of the moth, says the Indiana *Farmer*, we have many inquiries. One asks: "Will it keep out the miller to paste muslin over all the cracks in the hive?" From another, "Will putting the combs in tight boxes, and closing up do, etc.?" There seems to be an entire misconception of the moth miller. Understand, in the first place, where the combs are, the moth will be also. They live in and around the hives and combs, and in shutting up the hives you close them in instead of shutting them out. They will do no harm until the arrival of warm weather, unless the combs are kept in a warm place. The best plan is to pack the combs in a tight box of some kind; examine them at intervals of ten days or two weeks. If you find they have commenced work, fumigate the combs with sulphur. Keep all closed up tight. One time may be sufficient, but if, after a couple of weeks, you can still find signs of new work, give them another dose of sulphur. Twice fumigating will generally do the work. The fumes of sulphur will kill all the worms, and if there are no more eggs to hatch, once will suffice, but it will not destroy the eggs, so they must be watched until all the eggs have hatched. Afterwards, so long as they are kept closed up they are safe.

Shade for Hives.—The *American Rural Home* contains the following note concerning a new shade for hives:

> N. N. Betsinger, of Marcellus, N. Y., has just invented a novelty in the line of a shade-board for hives. It is made so as to take the place of the roof, is of light material, which is covered with tin, so as to prevent leaking, and painted white, so as to absorb as little of the sun's rays as possible. This board has a projection of about 18 inches in front of the hive, so as to thoroughly shade the entrance from 9 a.m. to 3 p.m., and is hinged to the hive in such a way that when the operator wishes to manipulate the hive it tips up, and the projection holds it in place entirely out of the way. Furthermore, it has a place in what is now the top of it, for the handle of an umbrella, so that in hot days the apiarist can sit and work in the shade. It takes but a moment to open and close the hive, and works so easily that only one finger is required to operate it. The whole thing is very ingenious, and Mr. B. deserves the thanks of bee-keepers for an invention which gives comfort to both the bees and the bee-keeper.

Mr. Betsinger is troubled very much with rheumatism, and invented this shade because he is unable to lift anything heavy. He is one of the most prominent bee-keepers of the Empire State.

* * *

"Different Kinds of Sugar," says an exchange, "such as sucrose, glucose, and lactose, agree in containing carbon, hydrogen and oxygen, the latter two in the proportions in which they form water. This sugar becomes the heat-giver to the bee in the following manner: Air containing oxygen is taken in by the bees through spiracles (the breaking openings) in the sides of which are 14 in number, and this oxygen is by degrees united with the carbon of the sugar, which is being carried about in solution in the fluids of the insect."

* * *

The Times, published by Mr. Henry A. Cook, at Eureka Springs, (a pleasure resort of Northwestern Arkansas) is one of the brightest and liveliest daily papers among our exchanges. Mr. Cook is a vigorous writer, an excellent editor, and a good printer. He was a pupil of the Editor of the BEE JOURNAL some 16 years ago. We wish him much success.

* * *

Mr. Ernest Root, son of the editor of *Gleanings*, "has taken unto himself a wife." The AMERICAN BEE JOURNAL wishes him prosperity and much happiness.

* * *

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and a Voting Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Voting Blank.

* * *

Bee-Men at Fairs attract crowds while handling bees. Do not fail to employ this method of advertising the honey product, and at the same time create thousands of consumers of honey, who may be reminded of the value of honey for nutriment and medicine by seeing your bees and honey on exhibition.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Trouble in Melting Wax.

Query, No. 267.—This spring, having considerable old comb, I began melting it up for wax, expecting to have plenty and to spare; but instead of wax it seemed like melted bee-bread, with only a light skimming of beeswax on top. I have made wax before and had good luck. What was the trouble?—J. F. P.

Overboiling. Melt your wax slowly and with care.—DADANT & SON.

Old combs. I once attempted to extract wax from very old brood-combs, and hardly got a smell of wax for my trouble.—G. L. TINKER.

Did you not let the comb be exposed more or less to wet for a long time?—C. C. MILLER.

I have had no trouble of this kind when I used a good wax extractor. I have seen cases of this kind when I thought too much heat had been applied.—H. D. CUTTING.

It would seem that the combs were old and probably filled with bee-bread and cocoon linings of cells. The newer the comb the more wax obtained. I have found that combs 6 or 7 years old would not give ⅛ part the wax that could be obtained from those one year old. The reason is obvious, and needs no explanation here.—J. E. POND, JR.

I guess that these combs had been exposed to the weather, and become rotten. I once tried in vain to get *any* wax out of such combs. Much bee-bread does not account for it.—JAMES HEDDON.

If the combs are moldy and rotten the wax will be dead, druggy stuff, and will not separate readily, and is worthless at any rate. The worst cheated I ever was in the bee-business, was by a supply dealer selling me a large lot of foundation made of dead, rotten wax. The combs will give me trouble as long as I tolerate them in my apiary. I would guess that your combs were old and full of bee-bread. I had a good deal of trouble with a lot of such combs myself some years ago. I finally got the wax separated and cleared by repeated melting in plenty of hot water.—G. W. DEMAREE.

Do Queens Re-Mate?

Query, No. 268.—Does an old queen re-mate about the time of going out with a swarm?—J. E. T.

No.—W. Z. HUTCHINSON.

I think not.—C. C. MILLER.

No, never.—G. W. DEMAREE.

No.—DADANT & SON.

I think not.—JAMES HEDDON.

I never saw anything looking that way, and I believe not.—G. M. DOOLITTLE.

No. The external passage leading to the spermatheca closes up after a queen becomes a few weeks old.—G. L. TINKER.

That is something we know nothing about. The general supposition is that a queen mates but once.—H. D. CUTTING.

I think she never mates after the first successful meeting with the drone.—A. J. COOK.

No, sir! most decidedly not. It is claimed by some that queens do mate more than once; this may be true during the first four or five weeks after they emerge from the cell, but it is physically impossible after they have arrived at maturity. I give the above as my opinion, based on my knowledge of the anatomical and physiological formation and construction of these insects; I have given the matter some considerable attention both in the way of study and experiment, and I believe I am correct. I am open, however, open to conviction, but demand *proofs* to the contrary.—J. E. POND, JR.

Extra Openings in Hives.

Query, No. 269.—Is it necessary to have extra openings on the back part of the hive, or on top, for ventilation, besides the entrance?—F. S.

I do not use such.—G. M. DOOLITTLE.

I do not know whether it is necessary, but I practice it.—C. C. MILLER.

I think that a good, large entrance is sufficient, when the hive is shaded.—W. Z. HUTCHINSON.

Sometimes, in very hot weather; not every year, and never on top.—DADANT & SON.

No. I would have no opening but the one where the bees enter in front.—A. J. COOK.

No. I do not like them. I do not want guard-bees at every point of the hive. Keep all hives well shaded.—JAMES HEDDON.

In summer I like to have my hives so I can raise them up from the platforms about ½ inch; that gives good circulation all around, and the bees will not hang out.—H. D. CUTTING.

I think that it is, if the entrance is small. I now make my hives with very large entrances, and have been for several years making them a little larger. It is now made 8⅝ inches long and 1¼ inches deep, which is not considered too large for winter or a full colony in summer time.—G. L. TINKER.

All the extra ventilation I ever give my hives is a slight raising of the cover to the hive when the weather is hot and the bees indicate lack of comfort by "laying out." A thin wedge-shaped piece of wood inserted under the cover at the back end gives a draft of air at the proper place.—G. W. DEMAREE.

I have never found it to be so. I give ample ventilation at the entrance, and find such sufficient. With a large entrance, ample room in sections, good shade, and a raised cover when extremely hot, no other or further ventilation is necessary. In winter no ventilation should be given other than at the entrance, except such as comes from covering in the frames with burlap or its equivalent, and placing a chaff (or its equivalent) cushion over all.—J. E. POND, JR.

Amount of Water in New Honey.

Query, No. 270.—What per cent. of water is contained in new honey when gathered from the flowers?—Mt. Sterling.

It differs.—W. Z. HUTCHINSON.

It varies so greatly that no answer can be given. Sometimes it seems nearly all water; then again the nectar is quite thick.—A. J. COOK.

It differs from one kind of flowers to another. The botanist Bonnier says that some nectar contains 75 per cent. of water. Some seasons yield more watery honey.—DADANT & SON.

The per cent. of water in the nectar of different kinds of flowers probably varies, but I think it is usually as much as 40 per cent.—G. L. TINKER.

It depends from what source it comes. Basswood honey, in dry, hot weather, contains very little water when it comes from the flowers; while teasel is about five parts water to one part honey.—G. M. DOOLITTLE.

It will vary with the different nectars and on different soils. I have reduced 40 per cent. in a large test tube, and again only 12 per cent.—H. D. CUTTING.

It depends upon the state of the weather, and the variety of bee-forage from which the nectar is gathered. Its density varies all the way from a small percentage in weight above water, to nearly the standard weight of marketable honey. At least such is the case in my locality.—G. W. DEMAREE.

I have never tested it experimentally, but I should guess about ¼ in volume and perhaps ⅛ or a little less in weight. It will vary so much in different grades of nectar, that no more than an approximation can be made.—J. E. POND, JR.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest: O⌐ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Report of the National B. K. Union.

WM. F. CLARKE.

This official document is now before the constituency of the Union. It is a straight-forward, business-like and satisfactory statement of what has been done by the Manager and Executive Committee during the first year's administration. The organization has proved its right to exist by what it has accomplished during one short twelve-month, and that it is needed still, is obvious enough. There is that California suit, in which a new trial has been asked. This case, whatever it costs, must be kept alive until a decision according to the facts is put on record. It is monstrous that in this enlightened age a court anywhere within the realm of civilization should put its judicial seal to such a verdict as the one rendered, based as it is on the testimony of possibly honest, but utterly deluded witnesses, who declared on oath they had *seen* the perforation and destruction of grapes done by the defendant's bees. This thing must be carried, if need be, to the Supreme Court of the United States, and that dull scholar, the public, taught the nature of a bee's tongue, and the impossibility of its being used for purposes of fruit destruction.

I am not sure but I have a case on hand requiring attention from the Union's Manager. Some weeks ago there appeared a statement in the *Montreal Witness*, Canada's most widely circulated weekly family paper, in reply to a question about glucose as follows:

"It is also put up directly in trade as honey—with which bees have had nothing whatever to do—being put up by means of appropriate machinery, into artificial combs made of paraffine!"

In correction of this and other erroneous statements, I wrote an article headed "Spurious Comb Honey," which duly appeared in the *Montreal Witness* of June 9, and at the close of it this editorial note: "The statement in the *Witness* in answer to an inquiry concerning glucose, was obtained from Appleton's Annual Cyclopædia, 1881, article Glucose."

If this is so, attention must be at once given to the matter, and the Messrs. Appleton brought to account. I have not access to the volume quoted, and therefore beg that our Manager will forthwith look up the reference, and should it be as stated, serve a notice on the publishers named, similar to that which brought the editor of the Chicago *Advance* to time. It is not to be tolerated that an honest industry should be maligned after this fashion.

Other proofs might be given to show that the "Union" still has work to do. Let it therefore be sustained. I own to having been somewhat disappointed that there was not a more general rally of bee-keepers to the standard of defense, when it was unfurled, manifestly with such good and urgent cause. Still, 324 members form a large body of people, and it is not unbecoming or improper for one of their number to say that it is a select body—a "picked and packed" phalanx who *mean business*, and all of whom will act as recruiting sergeants to get up a vast army of defenders, if circumstances arise to require it.

After all, there appears to have been members enough for the immediate demand, and by marvellously good financiering, the Union has accomplished a lot of work—all apparently that was immediately called for—and there is a balance of $15 in the treasury. "*Tres bien!*" as the French say. Now let every member promptly renew, and in view of the good showing made by the report, let us have a large enrollment of new names. I would like to see a good list from Canada. Our cause is one. Legal decisions in the United States will *morally* have all the force and value of precedents in the Dominion. The collection of sworn scientific testimony will be a service performed equally for both. Criticism and correction of newspapers, cyclopœdias, and other publications is work done for the entire world of literature. Education of the public mind, the *prestige* of association, and the power of co-operation are influences that pay no attention to inter-national boundary lines. So I hope that the corporal's guard from the Dominion will be swollen into a decent regiment, and that we may have during 1886-87 an army of at least a thousand strong.

I beg to move the following resolutions, and I wish I had been "right smart" and done it immediately on receiving the report in the BEE JOURNAL of June 9. However, those who have sent in their votes, will not, I think, begrudge a postal card in support of the following:

1. *Resolved*, That the report of the General Manager be accepted and approved; also that the thanks of the membership are due and are hereby tendered to the Executive, and especially to the Manager, for their efficient services.

2. *Resolved*, That the Bohn case be followed up until a judicial decision in accordance with truth and justice be inscribed among the national archives for all coming time.

3. *Resolved*, That there be an honorary life membership in the Union to be accorded to such as have rendered eminent service that cannot well be otherwise acknowledged, and that the roll be commenced with the following names:

Rev. L. L. Langstroth, who, if he had been properly defended in his rights, would now have been in circumstances to which his merits entitle him. James Heddon, as founder of the Union. Thos. G. Newman, in recognition of the ability and zeal shown by him as General Manager. G. W. Demaree in grateful acknowledgement of his having donated his "brief" to the "Union Defense Fund" in connection with the first trial case.

Properly speaking, the Manager, on whom the chief labor has thus far devolved, and who as a business man has a right to payment for his time, ought to have a salary, but we are not in a position to vote him one worthy of his acceptance; I therefore give notice of a motion to present him with a gold-headed cane at the next meeting of the North American Bee-Keepers' Society to be held at Indianapolis.

All of which is respectfully submitted.

Guelph, Ont.

[See editorial note on the foregoing article on page 387.—ED.]

Read at the Johnson Co., Ind., Convention.

Benefits of Bee-Keepers' Associations.

PROF. D. A. OWEN.

The old and familiar adage that "Whatever is worth doing at all is worth doing well," is no truer in any other undertaking than that of the culture of bees. It was thought for a long time that the bee was guided wholly by instinct in the performance of its domestic duties, and that it did the best possible when left alone. But since bee-culture has become a science, it has been found that the bee is capable of reasoning and being taught.

The bee is much older than Adam, but it was left to the sons of Adam to make it possible for a single colony, which formerly yielded from 50 to 75 pounds of honey, to yield from 500 to 700 and even 1,000 pounds per annum. While man has enabled the bee to improve upon its old methods of work, and increase its products tenfold, it has in return taught him not a few important facts. Through observations of this little animal in the field, he has learned the best method of cross-fertilization of all kinds of vegetation. The bee has taught him that a good fruit year does not depend as much upon the fact that it is preceded by a white or black Christmas, as upon the number of bees that survive the winter.

Bee-culture is a modern science. Thirty years ago a bee-keepers' association was scarcely thought of; to-day they are found in nearly every progressive county of the Union, where any attention is paid to the culture of bees at all. He who will take the time to run over the records of this last thirty years, will very soon discover some of the benefits derived from such associations. No single individual has ever been able to discover all that can be found out concerning any one thing. God never designed that he should. Man's dependency is one of the causes of his sociability; and should he become independent in any one particular thing, in that proportion will he become reserve and selfish. And so the benefits of sociability and meeting with friends and neighbors, and the exchange of opinions that come to the members of every association are found as well in this organization.

But it is our purpose to ascertain some of the special benefits derived from a bee-keepers' association. These benefits may be classed in two divisions, viz: the immediate and remote. I take the prime object of bee-culture to be, the production of honey; and whatever relates especpecially to that in this essay, I have denominated as immediate benefits; and those things which relate to the study of the bee as an animal or to the development of the flora, I have designated as remote benefits.

It was thought at first that the hive most nearly like the one the bee used in its wild state, would be best suited for her demands; so a portion of a hollow log was used, and probably received the name of "gum" from the tree of the same name, from which it was taken. When the tree could not be obtained, a box opened at one end, whose diameter was about the size of the supposed tree, was used. Where do you find such a hive to-day? Show me such a hive, and I will show you a man who either does not take much interest in bee-culture, or else he has been compelled by emergency to use it merely as a temporary convenience. With such a hive the colony was almost destroyed every time the honey was taken; and then we called it "robbing" the hive; the word hardly expresses the act, unless we think of it as highway robbery, where the individual is knocked down and left for dead. To-day, with the aid of recent inventions, we are enabled to take the honey without either robbing the hive or destroying the bees.

The invention of the movable comb-frames has added probably as much to the real progressive spirit in bee-culture as any other one thing. With these the frames can be removed with the comb, and the honey extracted without injury to either the bees or the comb. This method of removing the honey from the combs, and then replacing them, is a great saving, both in time and honey. Mr. Milton, of Wisconsin, says that it takes the bees as long to produce one pound of wax as it does to procure 20 pounds of honey; and Dr. Kirtland says they consume 25 pounds of honey in producing one pound of wax. Thus you see that for every pound of wax they produce it costs 45 pounds of honey. All of this is saved to the farmer by the investment of a little means in improved hives and a cheap apparatus by which the honey is driven from the combs by means of centrifugal force.

Besides the increase in honey obtained on account of the movable-frame hives, they greatly aid in the regulation of the breeding. The drones are like some who go by the same name in the human family, eating much and doing little; hence, when the drone season is over the workers kill the drones or drive them out to starve. But if the workers make a mistake and form too many drone-cells, the drones will sometimes be so numerous as to eat the honey as fast as the workers can procure it; but with the improved hive containing the movable comb, the drones can be removed and a comb for rearing workers can be inserted in its place. In fact the whole breeding department can be regulated to suit the convenience of the keeper.

In the cross-fertilization and the rearing of queens the movable-frame hives, says Richard Colvin, of Baltimore, are indispensable. He says that without them he would despair of Italianizing an apiary of even moderate size. The inventions in hives, during the last few years, have been quite numerous; and it is the design of these associations to take up these different inventions and discuss their relative values, and select the best from all.

It is of great importance to know just how to take care of bees through the winter. Some farmers seem to have excellent success with their bees without any special care, while others with all their care lose nearly all. One will leave his hives standing during the winter just in the same place and with no more protection than they had during the summer, while another places straw or perhaps carpet around his, and a few will put their hives in the cellar; and it frequently happens that each one has some peculiar experience. In these meetings these peculiarities are made known, and their causes inquired into. These annual or semi-annual meetings are fraught with more good than we at the time realize. It not unfrequently happens that many facts are recorded with all their coincidences which at the time illuminates nothing, but in the course of a few years become of great interest.

These meetings are to a great extent for the purpose of collecting and comparing data; and among the abundance that will be collected there will be not a little which will be classed as "trash;" but a great deal of it will be of untold value to the progressive bee-keeper. In making our deductions from these data, we should be very careful to make the fullest examinations of all the facts. No conclusions must be hurriedly formed. It is not sufficient to say that one man lost his bees because they were left out-of-doors, for probably his neighbor never lost a single colony, and to all appearances they had the same things to encounter. It is a common occurrence that two thermometers of the same make, and only a short distance apart, will register from 1° to 3° differently. The circumstances should be given in all their particulars, as to the make of the hive, the protection from the wind, rain and snow, how near the ground, etc.

Bee-keepers in general, who have tried it, recommend the wintering of bees in the cellar, which should be kept at a temperature of about 40°. It has been found that the bees when well protected in this way consume about two-thirds less honey than when left exposed to the weather. The bee must be treated in a great many respects as we treat other domestic animals. They do not hibernate during the winter as a great many persons suppose. Two things are obsolutely necessary, namely, food and warmth; without either they are sure to die. It not unfrequently happens that colonies are very poorly supplied with honey for the winter, and must be fed. To ascertain how well the provision is lasting, examinations must occasionally be made. This can be accomplished with any degree of satisfaction, only with the use of the movable frames.

Occasionally bees seem to die without any apparent cause, and the question is asked all over the country, "What was the matter with my bees? They have all died while the combs are full of honey. They could not have starved to death, for the hives were found to contain an abundance of honey. It is hardly probable that they froze to death, for in former years they withstood days of severer cold." Such has been the reasoning in respect to this puzzle. I remember one year ago, some thought owing to the drought in the fall, the bees had been compelled to gather poisonous honey, and therefore they had all been poisoned. But all of the bees did not die; and if some colonies had gathered this poison honey, would not all in the same apiary have gathered it? The theory of being poisoned does not seem to me to be a reasonable one. I remember at the same time some reported a few hives empty of both bees and honey, and the conclusion reached was, that these were weak colonies and poorly supplied with honey, and did actually starve to death. One bee-keeper stated that a portion of his bees he wintered in the cellar and another portion were left out and were well protected. Of those that were wintered out-of-doors, nearly all died, while those in the cellar nearly all lived. It seems to me that with the evidence presented at that meeting, the coroner would have been compelled to render a verdict after this form: The majority of the bees which died during the winter of 1884–85 came to their death by freezing, but why they should not have frozen during previous winters when the weather was much colder, does not come within the jurisdiction of this case. But the question *does* arise in the minds of every keeper, why did they not die at any other time when the winters were fully as severe?

In looking over the records of the past years I find that this same question was asked by nearly all Northern bee-keepers in the spring of 1863. Mr. Richard Colvin, of Baltimore, says that this question was asked him more than a hundred times. He says that the anxious inquirer has unconsciously answered his own question, when he says, "The hives were full of honey." He says that if you had examined your hives, you would have found your bees huddled between the cold walls of honey where they froze to death; and probably by their side you would have found a late swarm which had starved to death in and between the empty combs. The simple exchange of a few full for a few empty combs between these colonies would have saved both, and placed them in their best condition for breeding in early spring; for it must not be lost sight of that the colony in which the combs are filled with honey has no room for breeding, while the others would have nothing to feed the young, if bred, until it would be furnished by the flowers, which may not bloom before the following May. If this be the true explanation of this mystery (and I have no doubt that it is) how many thousands of dollars might have been saved last year had every bee-keeper been aware of this fact. Such questions as these are the vital questions to be discussed in these meetings, and just as much of the discussion as possible should be spread upon the minutes and kept for future reference.

The methods of breeding, rearing queens, dividing colonies, producing crosses, strengthening weak colonies, etc., are subjects which cannot be discussed too frequently and with too much enthusiasm in these meetings. As a result of these gatherings, I believe that more will be accomplished when each member gives his own personal experience in the work, rather than that which he has obtained from some work upon bee-culture. Whenever anything is presented to this body that has had no practical test by any member of the association, it amounts to nothing more than a mere suggestion. You want to know what success your neighbor has had in this or that experiment, and he desires to know what success you have had. Theories are good, but facts are better.

Let me suggest that each one keep a diary of the working of his bees. This will be beneficial in more than one way. When you notice anything peculiar about your bees put it down with the date; then when you come to these meetings, bring these memorandums with you, and I will assure you that this association will never lack for entertainment and instruction. This method will make you more observing, and will enable you to retain and use what you have already learned. When did my bees swarm? Was it a large swarm? What hive do they occupy? What kind of flowers do bees most frequent? From which do they gather the pollen and which the honey? These questions with their answers, and many others of similar nature will be found in these records. No doubt many of you are following some such plan as this. If not, you will find that it will beget a wonderful interest in the study. The ladies will observe something of special interest concerning the bees around the house, while the men will observe something very similar or very different, as the case may be, out in the field; and by this method you will obtain knowledge of bees that can be obtained in no other way.

There are a number more of very important topics under the head of immediate benefits, that I should like to speak of, but time will not permit should I speak at all of the remote benefits.

The question has frequently been asked, "Of what use is the bee except to gather honey?" The answer will not occur to the majority of people. Nature has a use of vastly more importance than the gathering of the nectar from the golden cups to satisfy our delicate tastes. Through her energy, nature secures to the farmer or fruit-raiser a good crop, and permanence of the best varieties of fruit. Gardeners have known for a long time that bees fertilize the squash, melon and cucumber flowers by carrying the pollen from one flower to another. Some have thought that bees injure some flowers by extracting the nectar from them. But what is the honey for? The best botanist will tell you that it is for the purpose of attracting bees to the flowers so that they may be thoroughly fertilized. The pollen or flower-dust is the fertilizing material. In many cases the flower that bears the pollen does not contain the pistil, the organ which receives the fertilizing material; so in order that the ovules, which are in the pistil, may be fertilized, the pollen must be carried to it from some other flower. This may be done by the wind, but it is at a great risk, for the wind might carry the pollen entirely away from the plant and leave the pistulate flowers entirely unfruitful. The plant has agreed to pay the bee, if she will carry this pollen to these flowers; and for this purpose, and this alone, botanists say the flowers bear nectar.

Even where the flowers contain both the fertilized and fertilizing organs, fruit is more certain when the pollen is brought from some other flower. The part that the flower and the bee play in this transaction is wholly unconscious with both. The bee in placing its head in the flower brushes some of the pollen off and carries it to the next flower, and accidentally drops it upon the pistil, which receives it and conveys it to the ovules or undeveloped seeds.

To the man who has an orchard, the culture of bees has a two-fold value; he not only obtains a rich supply of honey, but he has the best of an assurance that everything else being equal, he will always have a good supply of fruit.

Some years ago a wealthy lady in Germany established a green-house at considerable cost, and stocked it with a great variety of choice native and exotic fruit-trees, expecting in due time to have remunerating crops. Time passed, and annually there was a super-abundance of blossoms, with only very little fruit. Various plans were devised and adopted to bring the trees to bearing, but without success, till it was suggested that the blossoms needed fertilization, and that by means of the bees the needed work could be effected. A hive of honey-gatherers was introduced the next season; the remedy was effected; there was no longer any difficulty in producing crops there. The bees distributed the pollen, and the setting of the fruit followed naturally.

I have thus briefly noticed a few facts, which seemed to me to be benefits that may be derived from such an association. There are others probably of just as much importance, and as the study goes on, new ones will be continually presenting themselves.

For the American Bee Journal.

Marshall County, Iowa, Convention.

The Marshall County Bee-Keepers' Association met at Marshalltown, Iowa, on April 17, 1886, President O. B. Barrows in the chair. The minutes of the previous meeting were read and approved. The constitution and by-laws of the association were read, and a number became members.

This being the time for the election of officers, the following were elected for the coming year: President, O. B. Barrows, of Marshalltown; Vice-President, A. Fogg, of Marshalltown; Treasurer, G. W. Calhoun, of Marshalltown; and Secretary, J. W. Sanders, Le Grand.

The financial reports of the Secretary and Treasurer for the year just closed were made and accepted.

The subject of "Summer management of bees" was then discussed as follows:

I. N. Brown cleans out the hives well in the spring, keeps the brood-chamber warm, and uses enameled cloth over it. He has the Langstroth hive. He keeps the ground clean in his apiary, and finds it to be a great help to the bees in the honey season. He also makes a passage-way from the ground to the hive-entrance. He puts on the sections when the bees appear to be ready for them.

S. W. Myers adds brood-frames as needed, and puts on the surplus arrangements a few days before the honey harvest begins, so that the bees may become acquainted with it by the time they need it. He uses one-pound sections in frames.

"How do you prevent robbing?"

A. Pinkerton contracts the entrance to suit the strength of the colony, and adds sections when the white clover comes in.

The Secretary stated that robbers can be known in the yard by the use of a little flour. The exchange of the robbed with the robbers would, as a rule, stop it; or exchange with some strong colony.

The President puts on surplus arrangements when he sees that the comb at the top of the frames in the brood-chamber is being filled.

G. W. Calhoun said that if he wanted increase of colonies he would not put on the surplus arrangements until swarming is over.

A lady member stated that she found six queens with one swarm. She wanted to know how it happened. The Secretary then gave the process of queen-rearing, showing that the six queens were young queens that had hatched at the same time.

S. W. Myers reported that he at one time had three young queens and one imported queen all in a hive at one time. He removed the old queen and two of the young ones. The remaining one came out all right.

On the subject of uniting, or swarms settling together, Mr. Brown thought that the best queen would come out best. Several did not agree with him in this, but thought it best, if possible, to select the queen that the bee-keeper desires to keep.

"How do you prevent a swarm from settling in the top of high tree?"

The Mayor of the city being present, he said that he had successfully used what is called a "Yankee queen-stick." It is made by taking a stick 2 inches square, the top end dressed down to ⅛ square for about a foot; on this is nailed lath 6 or 8 inches long to form a net-work. When a swarm is about to settle, this queen-stick is held among them, and he found that they would settle on it.

The President here described a swarm-basket as used by many apiarists. Some members explained the advantage of contracting the size of the hive by a division-board, to suit the size of the colony early in the season; also how the weak may be strengthened from the strong, so as to make all good colonies early in the season; the advantage of having all hives alike in the same apiary, and the necessity of combs being straight in the brood-chamber.

The following reports were made on the results of the past winter:

I. N. Brown winters his bees in the cellar by tiering-up the hives and turning back the covers. His cellar has no ventilation. Part were under the dining-room. He finds that those under rooms without noise did the best. He put in 39 colonies and took out 37.

Dr. Lewis wintered his bees in the cellar. He put in 10 colonies and took out 10. He lost one colony after putting them on the summer stands.

S. W. Myers also wintered his bees in the cellar, with the temperature from 40° to 45°. He put in 8 colonies and lost none.

W. H. Ford wintered his in a cellar. He put in 14 colonies and took out 11.

A. Pinkerton wintered his bees in a cellar. The temperature got as low as 40°. His cellar had ventilation. He put in from Nov. 22 to Dec. 5, 117 colonies, and put out from April 7 to April 14, 116 colonies. He had the cellar partly light and partly dark, and found that those in the dark did the best.

J. W. Sanders wintered his bees in the cellar, with a temperature of from 38° to 45°. He had a number of light or nuclei colonies that were put away so as to save the queens if possible. Some proved a little light in stores. He put away 64 colonies in the first week in December, and on April 9 put out 56.

The subject for the next meeting is "Fall care of bees," and "How to keep honey in the best shape." Proper arrangements will then be made for the coming Fair. The association then adjourned to meet at the Court House in Marshalltown, Iowa, on Saturday, July 16, at 10:30 a.m.

J. W. SANDERS, *Sec.*

Read at the Mich. Horticultural Convention.

Fruit-Growers and Bee-Keepers.

W. Z. HUTCHINSON.

That bees are an important factor in the economy of nature, has long been proved. Only a few days ago I came across the following in the AMERICAN BEE JOURNAL:

"Most of the readers of the JOURNAL are aware that in England melons, cucumbers, pumpkins and squashes cannot be raised in the open air; they are all raised in green-houses and hot-bed frames, and many hours have I worked in the garden at home in England, with a fine, long camel's-hair brush, conveying the pollen from blossom to blossom, where the bees could not get to do the work; and even now in this climate, if we do not have good weather for the bees to work on the fruit blossoms, and especially on red clover saved for seed, we get but a poor crop. Last year I had a good crop of mammoth clover seed, while a few miles from here there was none, and I think I owe it to my colonies of Italian bees, for they worked on it first-rate."—W. ADDENBROOKE.

A few weeks ago I heard two old farmers discussing bees and buckwheat. "I tell you," said one, "buckwheat is a good thing for bees." "Yes," replied the other, "but the bees are not a very good thing for the buckwheat." "No, I suppose not," said No. 1. And thus the conversation ran on until I ventured to ask Mr. Farmer how he *knew* that buckwheat was injured by the bees. "Why, they take something from it, don't they? If they do, it injures it. How can it be otherwise?" replied my farmer friend. I then explained that I was a bee-keeper, and that I also raised buckwheat; that my buckwheat, which was at times fairly "swarming" with bees, yielded fully as well, if not better, than buckwheat that was far removed from the busy workers. I explained how necessary were the bees for the fertilization of blossoms; that if the blossoms were covered with muslin, so that the bees had no access to them, they produced no fruit. My opponent contended that it might not be lack of visits from bees that made the covered blossoms unfertile, but lack of heat from the sun's rays, as the result of being covered. I then cited to him the experiments of Prof. Lazenby, of Ohio, in covering strawberries with boxes, and fertilizing one variety with the pollen of another. Specimens that were left unfertilized produced no fruit; those that were fertilized did.

I also told that oft-repeated story of how the fruit-growers of acertain town in Massachusetts, years ago compelled the bee-keepers in that vicinity to move their bees out of town—the bees injured the fruit, so said the fruit-growers. In a few years they were persuading the bee-keepers to bring back their bees, as the crops of fruit had been exceptionally light since the removal of the bees. The bees were brought back, and with them came abundant crops. I told him that crops of red clover seed could not be raised in Australia until humble-bees were imported to fertilize the blossoms. I then waxed eloquent, and declared that the beautiful colors were not given flowers simply to please the human eye, the grateful fragrance to regale the human olfactories, nor did the nectar flow simply that it might be gathered up and used to tickle human palates; these things were the blossom's advertisement, which attracted to it the honey-loving bee, which came, bringing with it the fertilizing pollen from distant flowers. When I had finished, my opponent said: "Well, I don't *know* anything about it; maybe you are right, my friend."

Now, those of you who know that bees are largely instrumental in the fertilization of blossoms, and that the removal of the nectar in nowise injures the fruit or grain, may be inclined to smile at the old farmer's views, but he is not alone in his ignorance; even editors—yes, and agricultural editors at that—have exhibited lamentable ignorance upon this subject. The agricultural editor of a very prominent New York weekly paper very gravely informed an inquiring correspondent that bees were an injury to buckwheat, taking the same ground as did my farmer opponent. It was this same editor who said he had watched, with interest, the progress of the Italian bees ever since the first pair (!) was brought over from Italy.

It is nearly always ignorance that leads to trouble about bees. In Wisconsin, the past season, the owner of an apiary was sued for damages alleged to have been done to sheep while grazing in a pasture of white clover. It was claimed that the bees came in swarms and drove the sheep from the pasture! It is well known to those who are conversant with the habits of bees that, when foraging, a bee is timid, and will flee upon the approach of any object. The plaintiff in the suit was not only ignorant of the habits of bees, but seemed to forget that were it not for the services of the bees in fertilizing the white clover blossoms, there would have been no white clover pasture for his sheep. The judge in this suit decided that there was no law applicable to the case, and dismissed the suit. The plaintiff probably mistook the attacks of the troublesome gad-fly for the attacks of bees, which he saw working upon the clover. In California, recently, a bee-keeper has been sued by a fruit-grower for alleged damages done to grapes. The suit was in a justice's court; the apiarist was beaten, but has, I believe, appealed to the higher court.

As to whether bees really do injure fruit, is a question that has been frequently asked. I presume many fruit-growers will unhesitatingly say they do, and they know they do, while bee-keepers are equally certain that it is impossible for bees to pierce the skin of fruit. At the convention of bee-keepers held last December in Detroit, Prof. A. J. Cook said: "People have several times told me that their grapes had been destroyed by bees, and I have offered to come and witness the destruction ,if they would let me know when it is going on, but I cautioned them to first be sure that they had a case; I have never been called. Bees do sometimes attack grapes, however, but it seems when the weather has first caused them to crack, or something else has attacked and opened the skins." At Aurora, Ills., there is an experiment station of the United States in charge of Prof. Nelson W. McLain. The professor, in his report, says that he placed colonies of bees in a building, deprived them of food, except fruit of different kinds which was placed upon shelves around the sides of the room. All specimens having cracked skins, or that were intentionally perforated, were entirely consumed except the skins; but although these bees were starved to death, not a sound grape, apple, peach or fruit of any kind was injured. It is a physical impossibility for a bee to cut open the skin of a grape; its mandibles are not capable of cutting.

Now, then, although I deny that a bee can attack and destroy a sound grape, I do not deny that bees are sometimes a source of great annoyance, and perhaps some loss, to the grape grower. Even if the skins of his grapes are cracked, or have been pierced by wasps or birds, the grape-grower may not wish them sucked dry; or if he does not care for the loss of the cracked grapes, the presence of the bees is a great annoyance in gathering the fruit. Bee-keepers should not ignore this; neither should the grape-growers forget that the bees are their best friends, inasmuch as they fertilize the blossoms, and thereby produce the fruit. In the spring, when there are but few insects to fertilize the blossoms, the bees are very valuable. Both bee-keepers and fruit-growers should learn to bear and forbear. If I understand the matter, the injury and annoyance that grape-growers suffer from bees, are often of short duration, only lasting a few days, and, if all parties would exhibit a neighborly spirit, it is probable that the bees might be shut in their hives a few days, with no great loss to the bee-keeper, as bees never frequent cider-mills, nor suck the juices from fruit, unless there is a dearth of honey, and the loss of honey would not be great. If the weather is warm, the hives would probably require a great amount of ventilation.

But let us suppose that bees do injure grapes or other fruits, and that the bee-keeper cannot, or will not, keep his bees at home, can the fruit-grower, in justice, ask the bee-keeper to pay damages or to move his bees away? It may help us to turn the telescope and look through it from the other end. Let us suppose that the juices of fruits were injurious to bees, that when stored and used for winter food it led to disease among bees. Could not bee-keepers, then, as consistently complain if a vineyard was started near them, as fruit-growers can now complain when an apiary is brought into their neighborhood? Bees have existed as long as have fruits, and the keeping of one is as legitimate and recognized a business as the raising of the other, and if there are times when the two industries clash, it is doubtful if the difficulties can be settled by legal proceedings. In my own opinion, however, there is a moral law to priority of location. If bees are the cause of loss and annoyance to a grape-grower, and this loss or annoyance is not counterbalanced by the benefits derived from the bees, then the man who knows this and plants a vineyard in the vicinity of an apiary, is morally bound not to complain of the depredation of the bees, while the bee-keeper who brings an apiary into a grape-growing district should feel himself morally bound to keep his bees from annoying his grape-growing neighbors.

Rogersville, ♂ Mich.

For the American Bee Journal.

Surplus-Cases—Double-Walled Hives.

J. H. ANDRE.

On page 361 I mentioned a surplus-case which had no division-boards. As some of my writings have been misunderstood, and fearing the above would be also, I thought it might be well to make it plain now.

Suppose we have a hive that the top-bar of the frames comes just even with the top of the hive. Now make the case to accommodate as many rows of sections as you wish. Let it rest on the edges of the top of the hive, and the two sides of the case that the sections come sidewise to run down ⅜ of an inch lower than the others. Nail across the bottom of the case, where the rows of sections meet, a strip of tough timber one inch wide and ⅜-inch thick. Nail in short pieces of wood on the two ends of the case between the strips, and you have a case of solid sections which will be warmer, and the bees will not desert it on cold nights half as soon as where division strips are used, and which with a little care may be riddled in one-quarter the time that a case made in the old way can.

The case may be made even at the bottom, and the strips gained in by sawing notches in the sides of the case, which stiffen it, and if required a square block may be nailed in solid at one corner of the case that will just occupy the same space that one of the sections does.

By using this case, and ⅜ inch lumber to make it, the hive mentioned on page 361 may be made to accommodate the regular 4¼x4¼ sections, and thus do away with the objections that some may have to had it—its having an odd-size section.

It seems to me, so far as my observation goes, that it is useless expense in making chaff hives; they are certainly worse than single-walled hives, unless packed in a thorough manner. As I remarked once before, if not well packed,a long, cold spell will penetrate through the packing, and one warm day in winter will not warm them up, and in a single wall it will. The only advantage that I can see is in spring—they maintain a more even temperature during sudden changes of weather. I have seen chaff hives used side by side with single-walled hives, and I believe before I use them I will try clear pine just 2 inches thick. They will be cheaper and no trouble to pack.

I have read with much interest the way some of the leaders manage to get the hive full of brood in the spring. Now, suppose just before the apple bloom we take such a hive as I have described on page 361, in fair condition in regard to bees and brood, take out the frames and put back each five by turning them around, and also put the inside ones on the outside—this would be the same as cutting it into quarters and putting the inside combs on the outside. The hive and also the management of it is less than a year old. My health has been so poor that I have had no chance to experiment with it, but it seems to me that it is "the coming hive" for rapid brood-rearing, for comb honey, and safe wintering.

Lockwood, ♀ N. Y.

For the American Bee Journal.

Queen-Restrictors.

C. W. DAYTON.

I would like to describe a contrivance which was used a little during the season of 1884, and which is now being tested with improvements. In my estimation it covers the ground of sectional hives, reversible frames, honey-boards, contractors, queen-catchers and drone-traps combined. I do not wish to verify this statement on paper, but leave it to tests in the apiary.

The "restrictor" is adapted to four frames, but there may be from two to eight. The frame material should be one inch in width all around; as that is the best width for both brood and extracting. Material of any thickness will .do, so that the side-bars are strong after having holes made through them. It wants four frames of this description, the same size of the other brood-frames used in the apiary, leaving off the projecting arms. Then five others of the same dimensions, except that they should be ⅜ of an inch or a bee-space in width. Setting all of the frames on a level place, with a narrow frame between each two of the others, and a narrow one on each outside, they are all clamped together and a 3-16-inch hole is made through all of the side-bars at once edgewise, and one inch from the top or bottom of the frames. These holes are for small, flat-headed bolts that just reach through the frames, and are secured by a thin nut. The bolts are 6 inches long.

Before using the bolts two sheets of perforated zinc are prepared exactly the size of the frames, and having holes in the edges to fit and correspond with the bolts, and be held securely and evenly in place upon the side of the outside frames. This completes a queen-cage into which the bees from the outside are unrestrained. Combs may be built from foundation or transferred from other frames. The queen is put inside through a hole in a top-bar.

It is also furnished with projecting wires inserted in the ends of the top-bars, and near each of the four upper corners, and which wires are capable of removal to the other corresponding corners of the arrangement upon its reversion. Reversion is said to be a preventive of swarming by turning the queen-cells out of position, and being destroyed by the bees.

At the first thought this device will seem as useless, if not a positive nuisance, in a bee-hive; but connect with its use a little systematic management, and it appears differently. It is not specially intended for use until the colony is ready for the surplus receptacles, although with the zinc removed it may be used at the side of the brood and occupied gradually, or by furnishing each frame with supporting arms they may be used like other frames.

Here in the Northern States at least the main honey harvest seldom lasts more than 37 days; the length of time required to produce a honey-gathering bee. At the beginning of the harvest we would adjust the surplus receptacles as usual; at the same time caging the queen on the four empty combs, and leaving the cage or restrictor in the centre of the brood-nest. As the four combs will be filled solidly even to the exclusion of pollen, there will be a capacity in four Langstroth frames for at least 30,000 hatching bees every 21 days; employing the queen at the rate of 3,000 eggs per day for ten days, and requiring the almost unknown length of honey-yield of 47 days, that the last laid eggs might produce honey-gatherers.

It is very probable that by the end of the ten days she would need the usual rest; and the four combs prove to be an abundance of space. With this management it would need one comb on each side of the restrictor to catch the pollen, and the sections or drone combs for extracting might be placed in the most favorable position.

I believe that 30,000 hatching bees every 21 days is quite enough to maintain the working force of any colony. Many different constructions of the frames and manner of reversion have been experimented with. The reader will readily notice the many advantageous points.

"There," some will say after reading this, "he has 'ground an ax' this time surely." I would inquire if there would necessarily be discredit connected therewith? Show me a man who has not "an ax to grind," and I will just as surely show you a very lazy one also. There is scarcely an article written that does not help to "grind an ax," and what is more, such a one could not be produced. I might say that I have had an application filed for a patent on this contrivance, so that the usual bee-keeper may make and use it at present, but the right to a patent (if there is any) I may hold. Whether it is useful or not I am not positively certain, as when one becomes excited with studying over anything of this kind, and at such a time his judgment is apt to be very poor.

If we compare the merits of Mr. Heddon's hive to the position held by the Italian bee, and the reversible frame to black bees, that this arrangement may occupy its respective position, it would be a hybrid of the other two.

Bradford,♂ Iowa.

Local Convention Directory.

1886. *Time and place of Meeting.*

July 6.—Hill County, at Peoria, Tex.
H. A. Goodrich, Sec., Massey, Tex.

July 16.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM
OUR LETTER BOX

Good Report.—Geo. E. Hilton, Fremont,♀ Mich., on June 14, 1886, says:

I have just finished taking off over 500 pounds of new honey. From two hives I extracted just 70 pounds each. From another I took 50 one-pound sections; from another I took 46. My crates hold 28 one-pound sections, and the majority of my 60 colonies have two tiers nearly complete. I have never had as much honey at this time of the year since I have been keeping bees.

Pleased with the B. K. Union.—James McNeill, Hudson,⊸ N. Y., writes:

I am well pleased with the record which the General Manager has made for the Bee-Keepers' Union the past year. It certainly ought to commend the enterprise to every bee-keeper, and I trust that the proof will be forthcoming that it has done so, by a much larger list the coming year.

Working on Alsike and White Clover.—B. T. Baldwin, Marion,⊙ Ind., on June 16, 1886, says:

The bees all wintered well in this locality last winter, so far as I know, and are booming now on Alsike and white clover. My 60 hives are so heavy I can hardly lift any of them. I hope that we will win the Bohn lawsuit, let it cost what it will.

Bee-Keeping in Oregon. — Gust Murhard, Portland,⟜Oregon, on June 8, 1886, writes:

We have all prospects for an abundant honey yield this season; very warm weather with plenty of dew at nights. I have colonies of Mt. Lebanon bees, and crosses between the Mt. Lebanon and Carniolan (say ¾ Mt. Lebanon and ¼ Carniolan) that have in less than 14 days filled 46 two-pound sections with combs and honey ready to seal over, and I have at once given them another tier of 26 two-pound sections to keep them busy, and so prevent swarming, as I want the honey and not the swarms, as the honey is of more ready sale than bees. My Mt. Lebanon-Carniolan bees have proved the most desirable here in Oregon. They have wintered by far the best, have stood spring dwindling the best, are the least inclined to swarm if they have a young prolific queen of the previous season's rearing, are the most industrious honey-gatherers, and their queens cannot be excelled for prolificness.

Wintering Bees.—E. G. Slayton, Chetek⟜ Wis., writes:

The hive should be placed in a dry, dark cellar as soon as cold weather begins, before snow comes—about Oct. 20—the entrance stopped up so that they cannot get out, an inch hole bored in the end of the hive, and coarse wire-cloth nailed securely over the hole to give them air. Place old gunny sacks over the frames or any absorbent in the cap of the hive over the frames. The cellar should not freeze. Where it does not freeze they eat less honey and do not fill up so badly during the long winter. If it freezes they have to eat more to make the necessary heat. Do not take them out in the spring until soft or white maples are in blossom in the timber. Sugar making is then over, and the bees are saved from drowning in the maple sap, and it saves spring dwindling. Some winters they will winter all right on the summer stands, but it is not safe to risk so much in this State. Noise overhead does not seem to damage the bees if not shook up too much. It has been found that the bee-moth follow civilization. When my folks moved to Wisconsin, in 1844, the woods was full of wild bees, and it was six years before the bee-moth came into Sheboygan county. In Ohio (Lake Co.) the bee-moth destroyed bees in trees in the wood, and I have found colonies nearly destroyed by the moth in trees. One winter here my brother left his bees on the summer stands, and they wintered better than mine, and swarmed earlier in the spring. The next year his bees were all dead before Christmas, on the same stands; 7 colonies froze solid.

Expecting a Fair Yield.—Jos. E. Shaver, North River,♂ Va., on June 7, 1886, writes :

The weather has been almost too wet for bees this spring ; but they have been doing fairly well for the last week. I have taken some honey in sections from my first swarm. The Italians have swarmed two and some of them three times, while but few of the black bees have swarmed at all. White clover is in bloom now, and we are expecting a fair yield of honey this season.

Best Season for Five Years.—H. W. Carman, Custer,⊸ Ky., on June 14, 1886, writes :

I have been keeping bees for five years, and this certainly is the best season so far. I had one swarm on May 14. Two colonies had produced 40 pounds of surplus each by May 14. My bees are all Cyprians. I have had Italians, Holy Land and black bees, but I have discarded all but the great honey-gathering Cyprians.

Obtaining the First Honey.—G. M. Doolittle, Borodino,⊙ N. Y., on June 12, 1886, says :

Bees are obtaining the first honey of the season now from raspberry, locust and white clover. I am glad to stop feeding.

Dry Weather, etc.—Jacob Oswalt, Maximo,♂ O., on June 12, 1886, says :

We are in the midst of the white clover season. My bees are doing well ; I have had 12 swarms thus far. I took 35 pounds of surplus honey from one of my colonies this morning ; the honey is of superior quality, nicely capped and very white. The weather is very dry—we have had no rain for four weeks.

No Time for Swarming.—George Spitler, Mosiertown,⊸ Pa., on June 10, 1886, writes :

Bees are working nicely on surplus. Colonies are strong, but not swarming much—have not the time. They gathered lots of honey from wild raspberry, and I think from the blackberry also. White clover is splendid.

Abundance of White Clover.—W. T. Langley, St. Ansgar,♂ Iowa, on June 11, 1886, says :

Northern Iowa has never seen more white clover than there is just now. Bees are booming, temperature 93° in the shade.

Foul Brood Cure.—J. R. Bostwick, New Milford,⊸ Conn., writes :

Mr. H. L. Jeffrey was at my place to-day, and reading the report of the Johnson Co., Ind., Convention, where it refers to foul brood, he wished me to say that he has had much experience with it, and can clean it out of an apiary with pure, clean salt and water.

Rolling in the Honey.—John Hood, Crabb,⊶ Iowa, on June 10, 1886, says :

Last fall I put 23 colonies into the cellar and left 5 out-doors—1 in an old box and 4 in chaff hives. I lost 2 of those in the cellar, and after I put them on the summer stands 1 absconded. All the rest are in good condition. I have increased my apiary to 42. They are just rolling in the honey from white clover.

Very Hot Weather, etc.—Fayette Lee, Cokato,⊙ Minn., on June 12, 1886, writes :

My loss was 13 out of 124 colonies put into the cellar, and they did not have any ventilation from the outside, for I shut both tight last fall. I have some crates of honey about ready to take off of the hives. It is very hot—96° in the shade, without any rain. If it does not rain in ten days wheat will be a failure here.

Large Crop Expected.—W. Mason, Fillmore,⊸ Ind., on June 14, 1886, says :

I commenced extracting on June 1 from the raspberry bloom. The honey is very fine, but highly colored. It sold readily at 12½ cents per pound. I have extracted from several hives the second time. I have several hives with sections about ready to take off. I started with 30 colonies, and have had 7 swarms. There is a good prospect for a large honey harvest. I noticed a letter by Mr. Jonas Scholl, on page 363, on management for increase for spring work, which must be conceded as good by all experienced apiarists. A prolific queen first ; second, to know how to manage ; and you have the secret with any good hive.

Convention Notices.

☞ The 5th regular meeting of the Hill County Bee-Keepers' Association will be held on the first Tuesday in July, 1886, at the apiary of Hon. J. M. McDaniel, of Peoria, Tex. At the same time and place will be held a bee-keepers' honey picnic.

H. A. GOODRICH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 21, 1886.

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY.—Honey of all grades sells slowly at present, and prices are weak—14@15c. being the outside figure for best comb honey. Extracted is in light demand at 5@7c. California comb honey, in 2lb. sections, 9@12c.

BEESWAX,—25c. for good yellow.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote : Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white,6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The first new comb honey of the season—a sample lot of extra choice—brought 14 cts We quote : White to extra white comb, 11@14 cts.; amber, 7@10c. Extracted, white liquid, 4½@5c.; light amber colored, 4 to 4½c.; dark amber colored, 3½ to 3¾ cts.

BEESWAX.—Quotable at 20 to 24 cts.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.

BEESWAX.—Scarce at 25c.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½. Fermented goods, 2½@3c

BEESWAX.—Firm at 22c. for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote : Extracted honey brings 4@8c., and choice comb honey brings 12@15c. in a jobbing way.

BEESWAX.—In demand at 20@25c. for yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted, 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market seems quite dull for all qualities of comb honey, with but a moderate demand for extracted. We quote : Choice, white 1-lb. sections, 17@18c.; the same in 2-lbs., 16@17c.; dark 2-lbs., 15@16c. Extracted, white, in barrels or kegs, 7@8c.; dark, in same packages, 6@7½c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The new crop is coming forward in liberal quantity. Fancy qualities are receiving some attention, but dark extracted brings very low prices. White to extra white comb, 9 to 12c. Extracted, white liquid, 4¾c.; light amber colored, 4 to 4½c.; dark amber colored, 3 to 3½c.

BEESWAX.—20@24c. in lots from first hands.

SCHACHT & LEMCKE, 122-124 Davis St.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

Foundation, Cheap.—We have about 75 lbs. of Comb Foundation for the Brood-Chamber, 4x16½ inches, which we offer at 35 cents per pound. This is an odd-size lot of our regular "Dadant" stock.

◆

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

The July Number of FRANK LESLIE'S SUNDAY MAGAZINE opens with an article by the Rev. Frederick Pember on "The Charterhouse, London: Its Hospital and Public School," with a number of quaint and curious illustrations, including a portrait of Sir Thomas Sutton, the Founder. Five more beautiful illustrations of Luray Cave, in Page Co., Va., are given, with descriptions; and there are many short sketches and poems and a number of full-page beautiful engravings. This number is the first of the twentieth volume, and this is a good time to subscribe for the magazine.

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

Honey as Food and Medicine.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Advertisements.

ITALIAN Bees & Queens at reduced prices. Address, **OTTO KLEINOW,**
(Opp. Ft. Wayne Gate), DETROIT. MICH.
25Atf

HONEY-PAILS.—As I will dispose of my honey crop by other methods, I offer my stock of 3-lb, Jones' Pails at **$5.25** per 100. Several hundred of them are labeled, and the first orders will take the labeled ones. **C. W. DAYTON,**
25A2t BRADFORD, IOWA.

New White Clover Honey.

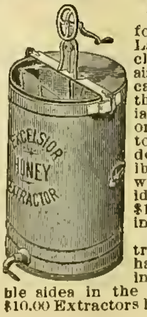
500 **POUNDS** of warranted ripe and A No. 1 Honey, at 7 cts. per lb.
25A1t **J. B. MURRAY,** ADA, O.

NEW CLOVER HONEY
FOR SALE,
In 17, 10 and 5 gallon kegs, at 8, 9 and 10 cents per lb., respectively, (kegs included). Also in comb at 16 cents per lb. in small cases, sections 4¼ inches square.
O. H. TOWNSEND,
25A1t ALAMO, Kalamazoo Co., MICH.

Sections and Berry-Baskets.

WE, the *original inventors* of the one-piece sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
13W13t MILTON, Trimble Co. N.Y

EXCELSIOR
HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	13x20	"	12 00
For 4 " "	13x20	"	16 00

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street. CHICAGO ILL.

PRICES REDUCED.

TESTED QUEENS $1.25 EACH.—Untested Queens, **75** cents each.

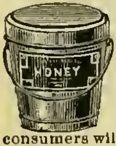
Address **C. WEEKS,**
24A2t CLIFTON, TENN.

Send 75 Cents for my New Book—"A Year among the Bees;"

114 pages, cloth bound. Address,

DR. C. C. MILLER,
20Atf MARENGO, ILLS.

NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Syrian Queens by Return Mail.

TESTED, $1.50 each; Untested, 75 cents. each; 12 for $8.00.—ISRAEL GOOD, Sparta, Tenn.
23Dtf

DR. FOOTE'S

HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping Bathing, Working, etc.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

Price only **25** Cents. Sent by Mail, post-paid.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

ITALIAN QUEENS

BRED from purest and best working stock. I will fill a limited number of orders at the following prices: Untested, $1.00 each; Tested, $2.00 each; Selected for breeders, $3.00 each. Good Hybrid Queens, when on hand, 50 cts. each.

G. W. DEMAREE,
23D4t CHRISTIANSBURG, KY.

1869. UP WITH THE TIMES. 1886

Armstrong's Perfection

CROWN HIVE

The brood-frames, honey-rack, and section-boxes are all **Reversible.**

At the St. Joseph and St. Louis, Mo., Expositions in 1885, it took the first premium over several of the most prominent bee-hives now in use.

Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ills.

DUNHAM AND VANDERVORT FOUNDATION.

WE have a large stock of choice yellow beeswax, and can furnish Dunham comb foundation for brood-comb, cut to any size for 40c. per lb. Extra thin Vandervort foundation, 46c. per lb. We guarantee our foundation to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20 cts. per lb. for sections.

F. W. HOLMES,
9Dtf COOPERSVILLE, Ottawa Co,, MICH.

BEAUTIFUL

FOUNDATION and very choice all-in-one-piece SECTIONS, V-groove—Wholesale and Retail, and exceedingly cheap. Send for samples and Free Price-List of everything needed in the apiary.

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RAYS OF LIGHT, the original Bee and Poultry Journal. Published in the interest of Bee-Keeping and Poultry Raising. J. J. MARTIN & CO., Publishers, North Manchester, Ind. Sample copy FREE. Subscription price **50 cents** *per year.* 11D8t

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FOR SALE.

Italian Queens.

	May.	Jun.	After
Untested,	$1.00	$1.00	.85
Six,		5.00	4.50
Tested,	2.50	2.00	1.50
2-fr. Nuclei—untested queen.	3.00	2.75	2.25

Also Bee-Hives, Foundation, etc. Send for Price List. **JNO. NEBEL & SON,**
13D6t HIGH HILL, Mont. Co., MO.

BEES, QUEENS,

AND

APIARIAN SUPPLIES.

First-Class Goods at Low Prices.

A FINE LOT OF ITALIAN BEES
For Sale Cheap.

Send Postal Card for Illustrated Circular and Price-List.

J. C. SAYLES.
13Dtf HARTFORD, WIS.

White Poplar Sections

We make the finest Honey-Sections in the World and make no exceptions. G. M. Doolittle says: "The last sections are just complete." James Heddon—"They excel *everything* in the line of perfect workmanship." Prof. N. W. McLain—"The sections excel anything I have seen heretofore." J. B. Mason—"Have received samples from all manufacturers who advertise in the bee-papers. I must say this is by far the nicest section I have ever seen." Jno. L. Janeway—"They seem perfection itself so far as human workmanship can go." Sample for 2-cent stamp. Price-List of Sections, Hives, Syrio-Albino Queens and Bees, and other Apiarian Supplies, free.

Address, **DR. G. L. TINKER,**
3Dtf NEW PHILADELPHIA, OHIO

NOW READY TO SHIP—Untested Italian Queens at **$1.00** each. Send for Catalogue. **MARTIN & MACY,**
20D4t N. MANCHESTER, IND.

WE Make a Specialty of HONEY-LABELS, Section Cartons, Extracted Honey Packages, etc. Our large, 20-page Catalogue is free.

A. O. CRAWFORD, S. Weymouth, Mass.
19D6t

THE WESTERN WORLD

GUIDE and HAND-BOOK

OF USEFUL INFORMATION.

For HOME SEEKERS or Tourists, Capitalists or Laborers. A vast amount of information not to be found elsewhere at any price.

A cloth-bound book, 4x7 inches, 288 pages

Price, 50 Cents.

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Government Land Laws giving complete law on the subject of PRE-EMPTION HOMESTEAD, TIMBER CULTURE, SOLDIERS' HOMESTEAD, SWAMP LANDS, LAND WARRANTS, SCRIP, INDIAN TRUST LANDS, DESERT LANDS, COAL LANDS, TIMBER LANDS, MINERAL LANDS, AGRICULTURAL COLLEGE LANDS, ETC.

How to Acquire Lands of any kind belonging to the Government by any forms of entry; who may acquire them, and the different laws applicable to the different sections.

Postal, Pension and Patent Laws of the United States.

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Rules for measuring Lumber, Logs, Grain, Liquids, Tables of Weights and Measures of all kinds, Interest Rules and Tables, Lumber Tables

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Contains also a Million useful facts.

The Weekly Bee Journal, for one year, and the Guide, postpaid, for $1.30.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

C. B. LEWIS & CO.
51Atf. **WATERTOWN, WIS.**

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL

ALLEY'S QUEENS.

READY JUNE 1, 1886.

WARRANTED	Queens,	by mail	....	$1 00
"	"	"	per ½ Doz...	5 00
SELECT	"	"	each	1 25
"	"	"	per ½ Doz...	7 00
TESTED	"	"	each.........	1 50

By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.

HENRY ALLEY, WENHAM, MASS.
20Atf

ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*

9W1y **J. M. JENKINS, Wetumpka, Ala.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
14Wtf **MAZEPPA, MINN.**

A Year among the Bees,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

QUEENS BY RETURN MAIL.

I AM up with my orders and can send QUEENS by return mail. Capacity, 75 to 100 a week. **Six Warranted Queens for $5.00.** I have the finest breeders I ever had. Also English Rabbits $1 a pair.

22Atf **J. T. WILSON, Nicholasville, Ky.**

TESTED Queens, (Imported Mother), $1.25 each; $12 per doz.-O. N. Baldwin, Clarksville, Mo.
4A1y

Lewis' V-Groove One-Piece

SECTIONS.

Down, Down, Goes the Price!

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G. B. LEWIS & CO.,
WATERTOWN, WIS.
April 15, 1886. 16Wtf

40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. **Circular Free. T. L. VonDorn,** *Omaha, Neb.* **None Better**
12A16t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DO YOU EAT CANDY?

SEND $1.25 and I will express 5 lb. Todd's Honey Candies, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. 1 of Frank Cheshire's New Book mailed free for $2.50. **ARTHUR TODD,**
1910 Germantown Ave., PHILADELPHIA, PA.
17A10t

TWO-POUND

SECTIONS.

Job Lot—Cheap!

WE have on hand a Job Lot of **20,000** One-Piece Sections with square groove, which we will close out at **$3.50** per 1,000, or $2.00 for 500. The size is: top and bottom, 6 inches; sides, 5¼ inch; width of section, 1¾ inches—narrow tops.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

RIBBON BADGES.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOS. G. NEWMAN & SON.,
953 & 925 West Madison Street, Chicago, Ill.

BY RETURN MAIL

Select Tested **QUEENS, $1.50 each.** Warranted Queens, 75c. Per doz., $8.00. Strong three-frame Nuclei, with tested Queen, **$2.50 each.**
☞ All Queens strictly pure Italians. ☜

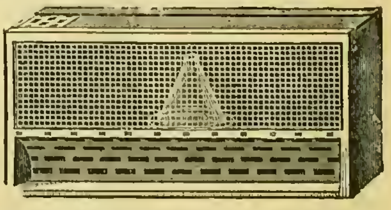
Address, **JAS. F. WOOD,**
20A20t NORTH PRESCOTT, MASS.

One-Piece Sections,

MADE with a Λ-groove, warranted perfect, 4¼x4¼ and 1⅞ wide—$4 per 1,000. Five per cent. discount on orders of 5,000 and over at one time.

J. P. McGREGOR,
22A3t FREELAND, Saginaw Co., MICH.

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

GIVEN AWAY!
SEWING MACHINES.
100,000
Newest and Best.

Black Walnut, Drop Leaf Table Cover 3 Drawers and Full Set of Attachments, only $14.50, Cash or FREE for 20 Subscribers to ☞

FREE HOMES
IN THE
United States,
How to Get Them.

Where to Invest Money or find Employment, told in the most widely-circulated paper published. Price $1.00. Send to **CHICAGO, Ill.,** For Sample Copy of

THE WESTERN WORLD.

Carniolan Queens.

HAVING located an apiary of this new race of bees in an isolated place surrounded by high mountains, where a honey-bee was never seen until we placed them there. We have 2 of the finest Queens that Mr. Benton could furnish to breed from; and can furnish Queens of undoubted purity, at the following prices:

June, 1 Queen,....	$3 50....6 Queens,.....	$18 00
July, 1 Queen,.....	3 00... 6 Queens,.....	15 00
Aug., 1 Queen.....	2 50....6 Queens, ...	12 00
Sept., 1 Queen,....	2 25....6 Queens, ...	10 50

ITALIANS bred in a separate apiary 40 miles away; of the best strains, warranted purely mated:

June, 1 Queen, ...	$1 00....6 Queens,.....	$5 00
July, 1 Queen, ...	1 00....6 Queens, ...	5 00
Aug., 1 Queen, ...	1 00....6 Queens, ...	4 50

Address, **J. B. MASON & SONS,**
24A2t MECHANIC FALLS, MAINE.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. June 30, 1886. No. 26.

Queens to Canada.—On page 405, Mr. Doolittle has detailed his sad experience in trying to mail queens to Canada this season, as heretofore. Until there is a new Commercial Treaty between the United States and Canada, we cannot hope for much relief. At present it is plainly against the postoffice regulations to send queens, or any other merchandise by mail to Canada; we hope for some new regulations, and have written the following letter to the Superintendent of Foreign Mails, for any information he may possess on the subject, and any information we may receive, will be given to our readers:

OFFICE OF THE NATIONAL BEE-KEEPERS'
UNION, CHICAOO, ILL., June 25, 1886.

N. M. BELL, ESQ.,
Supt. of Foreign Mails, Washington, D.C.

DEAR SIR:—I have noticed some intimations that there will be a new Treaty with Canada, which will allow more latitude to the business by mail between the two countries.

Heretofore we have been able to send queen-bees through the mails to Canada—now they are being stopped at Suspension Bridge, N. Y.—notwithstanding there is no duty in Canada for stock imported for breeding to improve the stock. Bees are imported for just that purpose, and should pass *free*.

Will you kindly advise me if such a Treaty is contemplated? And any other particulars concerning the transportation of queen-bees in the mails to Canada "for the improvement of stock" that may be in your possession, will be greatly appreciated by

Yours, etc.,
THOMAS G. NEWMAN,
General Manager.

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Bee-Pasturage is the title of a new pamphlet by Henry Dobbie, Esq., "certified expert of the British Bee-Keepers' Association." It gives "observations and practical instructions on the cultivation and propagation of the best honey and pollen-producing plants, also their honey and pollen values, time of flowering," etc. It contains 75 pages, and is nicely printed. It is published by Jarrold & Sons, 3 Paternoster Buildings, London, England.

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"A Bird's-Eye View of Bee-Keeping," is the title of a new work written by the Rev. W. F. Clarke, and being published by Jones, McPherson & Co., at Beeton, Ontario, Canada. It is written in rhyme, and will be sold at 25 cents.

Bees in the Mails.—There seems to have been a new trouble sprung upon bee-keepers without the least premonition. Mr. W. H. McWilliams, of Griffin, Ga., has had a queen-bee stopped in transmission through the mails, because other bees were caged with her. He has appealed to Hon. John Jameson, General Superintendent of the Railway Mail Service, who has *ruled* that queen-bees ONLY can be sent by mail. We are well aware that the *Postal Guide* only mentions "queen-bees," but when the Ruling was reversed on Jan. 14, 1880, the following was the press dispatch printed in all the daily newspapers, and copied into the BEE JOURNAL for 1880, page 74:

> The Postoffice Department, on recommendation of the National Bee-Keepers' Association, has reconsidered the order excluding queen-bees from the mails. Queen-bees and their necessary attendants will be allowed to go through the mails, so long as no one is injured by them.

At the National Convention held in Chicago, Ills., in October, 1879, Prof. Cook was appointed to wait on the Postmaster General and endeavor to have the Ruling reversed, which had excluded "queen-bees" from the mails. He went to Washington in January, 1880, and having obtained the valuable aid of Hon. Edwin Willits, M. C., of Michigan, in presenting the matter to the Postoffice Department, the bees were ordered to be admitted to the mails, when put up with "double wire-screens," etc.

For the past six years, therefore, the United States mails have been freely used for the transmission of "queen-bees and their necessary attendants." This privilege has been alike valuable to the breeders of queen-bees and to the apiarists who purchase them "for the improvement of stock." Now, to apply a technicality to the wording of that "permit," not at the time intended by the Postoffice Department (that of excluding the queen's "necessary attendants") entirely nullifies the privilege then granted, entails a serious calamity upon a large class of our best citizens, and is wholly un-called-for, unnecessary and unjust.

As General Manager of the National Bee-Keepers' Union, we have sent the following letter to the General Superintendent of the Railway Mail Service:

OFFICE OF THE NATIONAL BEE-KEEPERS'
UNION, CHICAGO, ILL., June 25, 1886.

HON. JNO. JAMESON,

DEAR SIR:—I am informed by Mr. W. H. McWilliams, of Griffin, Ga., that a "queen-bee" of his has been stopped in the mails, because she was accompanied by other bees—her attendants.

Of course this is but a technicality—without her attendants a queen would soon perish, and to show that such was intended, the Associated Press Dispatch, on Jan. 14, 1880, read: "Queen-bees *and their necessary attendants* will be allowed to go through the mails, so long as no one is injured by them."

I noticed at the time that the "Ruling" in the Postal Guide only stated "queen-bees," but did not suppose any point would be raised on it, and so said nothing further about it.

Until now I have never heard of any trouble. During six years the bees have been transmitted in the mails—no one has been stung, and the mails have not been daubed; and *now just as the time has come for bees to be sent through the mails*—to have a mere technicality interfere with that traffic and entail a heavy loss on bee-breeders is very unfortunate.

Will you kindly give this your attention, and reverse the order or instructions to postmasters, so as not to destroy an industry that is the sole business of many persons?

Yours, etc.,
THOS. G. NEWMAN, *General Manager.*

Prof. Cook has also written the following letter to the same person:

AGRICULTURAL COLLEGE, MICH. June 24, 1886.
HON. JNO. JAMESON,
Gen. Sup. R. W. Mail Service, Washington, D.C.

DEAR SIR:—For some years prior to 1880, queen-bees were excluded from the mails. Cause of ruling, mails daubed, agents stung. This resulted in serious hardship to bee-keepers. In sparsely settled localities express offices were often a score of miles away, while the postoffice was near by. Again, express was often dollars while postage would only be a few cents. I was appointed to visit Washington, and urge a change in the ruling. I did so, and met with success. In January, 1880, the following Associate Press Dispatch was sent out from Washington. "The Postoffice Department, on application of the Bee-Keepers' Association, has reconsidered the order excluding queen-bees from the mails. Queen-bees and their *necessary attendants* will be allowed to go through the mails so long as no injury is done."

The way queens have been sent since then makes it certain that no daubing of the mails, or stinging is possible. This privilege has been a great aid to an important and valuable industry.

Of late you have ruled and so instructed the postmaster at Griffin, Ga., that ONLY queens can be sent. Now, as queens cannot be sent without a few worker bees, this ruling practically places an absolute interdict on the business. Surely, you cannot have known this or you would have ruled otherwise. The presence of ten or fifteen worker bees can in no wise do harm, while they are absolutely necessary to care for the queen.

May we not, Dear Sir, hope and expect that you will change your order and so inform the postmasters? Otherwise you will seriously cripple, and in many cases, ruin many who are engaged in this important industry.

Again, in a few postoffices, notably that at Niagara Falls, queens are forbidden to pass into Canada. Must this be so? They have been allowed to pass freely all these years, greatly to the advantage of both countries, though more to our advantage than to that of the Canadians.

Now inasmuch as there is no duty on stock secured for breeding to improve our herds, which describes queens exactly, may we not hope for a ruling that queens may pass unobstructed as heretofore into the Dominion? Yours truly, A. J. COOK.

Hon. E. Willits, President of the Michigan Agricultural College, has also written a strong letter to Mr. Jameson, with whom he is personally acquainted. This was done at the solicitation of Prof. Cook. President Willits has many times proved himself a true friend of the bee-keepers of America, and on their behalf we tender him their sincere thanks.

While awaiting the result of the foregoing correspondence, we lay it before our readers, knowing full well that they will appreciate our endeavors, as well as be painfully interested in the result.

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The Rush has Come, and supply dealers find it very difficult to fill the orders for sections, foundation, etc., as fast as they come. We advised all to send their orders early; but, alas, this advice was unheeded, and now manufacturers are running day and and night to accommodate the pressing demand for goods. They would have been glad to have had these orders in April and May. Retailers are between two fires—consumers and manufacturers—and are trying to keep up with their orders. There is but little delay, however, except for "special sizes" not usually kept in stock. This ought to teach a lesson of uniformity; use regular sizes of everything; buy "foundation" in 50 or 100 pound boxes, and sections in 500 or 1,000 packages.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Syrians and Italians.

Query, No. 271.—1. Are the Syrian bees better honey-gatherers than the Italians? 2. Are they, or are they not, more gentle and docile than the Italians?—C. T. C.

The Syrians that I have had were no better honey-gatherers than the Italians, and not nearly so docile.—W. Z. HUTCHINSON.

1. With me the Italians are far the best honey-gatherers. 2. Full-blood Syrians are nothing near as gentle as the Italians.—G. M. DOOLITTLE.

1. I think not. 2. I have every reason to believe that they are more irritable and belligerent. I have never owned any, and I judge from observation.—JAMES HEDDON.

1. I think so; only, however, because they breed faster, and so are stronger. 2. At first they seem crosser, but soon they are handled as easily. The first year our Syrians were quite irritable; since which they are very amiable.—A. J. COOK.

No, but the crosses between Syrians and Italians prove excellent honey-gatherers. Pure Syrians are nearly, if not quite, as gentle and docile as Italians, but they must be handled differently.—G. L. TINKER.

1. I doubt it, but I have had little chance to know. 2. I never noticed any difference, but, as before, I have had little chance to know.—C. C. MILLER.

Some colonies of Syrian bees are extra-good honey-gatherers; also the same with Italians. It will take years yet to decide that point. My limited experience with Syrians is this: They will handle just as well as Italians, but you must not jar them in the hive; if you do they will "boil up and over."—H. D. CUTTING.

1. There is not much difference in the honey-gathering qualities of Italians, Cyprians and Syrians. 2. Purely bred Italians are the gentlest bees I have ever had in my apiary. Some colonies of Syrians and Cyprians are just as gentle and amiable as any Italian colony, but such is not the rule, as scores of experienced apiarists will testify.—G. W. DEMAREE.

1. Some say they are. These mostly offer queens for sale. As for myself I have not seen that any particular difference exists. They are *not* more gentle and docile than the Italians. I have seen those that were as ferocious as Mexican hornets. I have my doubts, too, about the purity of these new races—so-called—at least those that were first offered as "dollar" queens. Nothing, as yet, has been found that will compare with our noble, thoroughly-tested Italians.—J. E. POND, JR.

Taxing Colonies of Bees.

Query, No. 272.—Are bees taxable property?—Wis.

Yes.—DADANT & SON.

In my opinion they are.—W. Z. HUTCHINSON.

I pay taxes on mine. I think I ought to.—C. C. MILLER.

They are taxed in Ohio; and I know of no reason why they should not bear the burdens of taxation like other property.—G. L. TINKER.

They are not usually taxed, but I see no reason why they should not be.—A. J. COOK.

Yes, unless specially exempted from taxation by statute. This is the case in Iowa, and perhaps in other States. If bees possess a marketable value, why should they not be taxed?—J. E. POND, JR.

They are taxed here when a person is not in debt, the same as other stock. If in debt, no stock is taxed. As our assessors do their work in the month of June, nothing unfair is likely to occur, as bees are on the increase then rather than on the wane.—G. M. DOOLITTLE.

I asked a prominent judge in this county a few years ago, this same question, and he said that "he did not know, but if we talked about it very much we would have them all taxed." His idea was this: If bees were taxed in some sections and not in others, to have an act passed in each State exempting bees from taxation.—H. D. CUTTING.

I hope so. We ought to be willing to assist in paying for the blessing we share in enjoying, had we not? If we want our property rights respected, let us insist that bees are property, and taxable property, too. Property in bees has been so long degraded that not one bee-keeper in a thousand realizes what his rights are.—JAMES HEDDON.

If bees, when in a State of domestication, are "property" in the common meaning of that term, why may they not be taxed as other property is, without violating principles of human rights, is a question that is self-answering. The fact that bees in the past have been regarded in law as being *feræ naturæ*, when not reclaimed from the wild state, or when at large, and without means of identification, cannot affect the right or power of the State to tax them as other property when their state has been changed from the wild to the domestic state, and made useful and profitable.—G. W. DEMAREE.

Using Empty Combs.

Query, No. 273.—My loss is 27 out of 44 colonies; 13 died in the hives, and 14 have dwindled. The combs can be considered in fair condition. Shall I use the combs for increase? If so, how can I use them to the best advantage for increase and honey? Shall I use any comb foundation? I use the 10-frame Langstroth hive, increase by natural swarming, and prevent second swarms.—Ont.

Yes. Use them to make divisions.—DADANT & SON.

You can use them to the best advantage by working for extracted honey. Hive the bees upon the empty combs.—W. Z. HUTCHINSON.

Why not give them to new swarms? Unless nice, they can be melted up and foundation given to new colonies.—A. J. COOK.

If the combs are worker combs I should use them all before using any foundation. Give them to the bees just as fast as they can take care of them.—C. C. MILLER.

Tier up the combs on the hives in use, and when the colonies become very strong, make divisions. If a swarm issues, and comb honey is wanted, hive it on a few combs, and adjust sections at once.—G. L. TINKER.

Work for extracted honey and use all of your extra combs. It will depend upon your locality and honey yield whether you will want to use foundation or not. Prevent all second swarms if you want honey in place of increase.—H. D. CUTTING.

1. Yes. 2. Give each new swarm five of the combs, and put on the surplus arrangement when the swarms are hived. Contract the hive to the five frames, using dummies.—G. M. DOOLITTLE.

I would use the combs for obtaining increase, and for taking extracted honey. By no means would I use foundation as long as I had good combs to supply the bees. I regard a large supply of good combs as one of the essentials to a good outfit to the apiary. If I have more than I can find use for, I keep them until I do need them.—G. W. DEMAREE.

1. Yes. 2. By giving them to colonies as needed, or by forming nuclei and building up the same with the combs. A little care and the exercise of judgment will utilize all the combs you have on hand.—J. E. POND, JR.

1. Yes, use your combs. Run a part for extracted honey, making one queen do double service for a time, and when both sets of combs are well filled with brood, divide the colony if it does not swarm. Do not place full combs and empty frames, or frames of foundation side by side. Let all frames have an equal chance, if you want nice combs.—JAMES HEDDON.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest; O⌐ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Mailing Queen-Bees to Canada.

G. M. DOOLITTLE.

In the BEE JOURNAL for 1883, page 511, I had occasion to speak of sending queens by mail to Canada, giving there how I had managed, until there was no more trouble with their going safely than in the United States, for queens had then been sent to that place so long that it had become a custom with the postmasters of both countries to look upon queens as mailable between the United States and Canada, although every Postal Guide printed said plainly that such was not the case.

Knowing that the laws in force between the two countries would prohibit queens from the mails to Canada, if such laws were executed, I closed my article thus: "As the queen traffic is assuming large proportions between the two countries, I would suggest that a better way than the above would be for some of the bee-keepers of either country, having influence with the postoffice departments, to see if a law cannot be obtained allowing queens to pass in the mails between the two countries, thereby avoiding the very appearance of evil." But as queens were allowed in the mails we settled down with folded hands, contented to let things remain as they were, until now we are rudely awakened by queens being returned from the lines as "unmailable to Canada."

On May 16, among a lot of queens placed in our postoffice, was a choice selected queen directed to Ontario, Canada. Four days later the same queen came back with "unmailable to Canada" written on the tag, sent by the postmaster at Suspension Bridge, N. Y. The package was directed as hundreds of such going safely had been before it, saying, "Queen-bee for the improvement of stock," and 10 cents in postage stamps affixed. I immediately wrote to the Suspension Bridge postmaster as follows:

"Borodino, N. Y., May 21, 1886.

Postmaster at Suspension Bridge, N. Y.—Dear Sir: The enclosed tag you will doubtless recognize as one attached to a little box containing a queen-bee and her attendants, which you returned to our postmaster as unmailable matter to Canada. I am aware that the postal regulations say that you are right, but to help advance a growing industry, both in Canada and the United States, postmasters of the past have allowed queens to pass to and from Canada as samples of merchandise (which they really are), much to the advantage of all concerned. I have sent during the past five years hundreds of queens to Canada, all of which have gone safely, since I wrote *queen-bee for the improvement of stock* on the tag. Now, will you not please do as former postmasters have done, and help advance our industry? By so doing you will only be following a custom of the past, and receive the heart-felt thanks of bee-keepers in all parts of the United States and Canada. Please reply telling me what I may expect, as I have orders for a score or more of queens from Canada."

The following is his reply:

"Suspension Bridge, N. Y., May 25, 1886.—Mr. G. M. Doolittle—Dear Sir: You letter at hand this a.m. Postmasters who have allowed bees to pass into Canada by mail have not understood the rulings of the postoffice department. By reading Note 4 on page 770, in the January, 1886, Guide, and also Note 20 on page 753 of the same Guide, you will see that merchandise is not mailable to Canada. I send to your postmaster a letter which I have from the department on the bee-question. Please call at the postoffice and see this letter. You can then write to the department and ask them to remedy the matter. We cannot allow them to pass through the mail.—Wm. Carr, P. M."

Upon calling at the postoffice I found the following letter in the hands of our postmaster:

No. 71924 Canada.

"Postoffice Department, Office of Foreign Mails, Washington, D. C., May 6, 1886.—Sir: In reply to your letter of the 4th inst., inquiring as to the rate of postage applicable to bees addressed to Canada, I have to inform you that the transmission of articles of merchandise by mail between the United States and Canada is limited by the postal arrangement in force between the two countries to *bonafide trade patterns or samples* (specimens) not exceeding 8 ounces in weight, and that articles of merchandise such as queen-bees, sent for sale, in execution of an order or as gifts, are not bonafide samples, and are not transmissible by mail from one country to the other. In this connection see Note 4 of foreign postage table on page 770, and paragraphs 20 and 21 on page 753 of the United States Official Postal Guide for January, 1886.—Nicholas M. Bell, Superintendent of Foreign Mail.

To postmaster at Suspension Bridge, N. Y."

It will be noted that the postmaster at Suspension Bridge had taken occasion to write to the superintendent of foreign mails 12 days before I mailed any queens to Canada. What caused him to do so is unknown to me. In a day or two after this I fitted up a cage to go in an ordinary letter envelope, put the queen in and mailed it via Buffalo, N. Y., by registered mail. As the queen arrived safely sent in two sealed envelopes (my envelope and the register envelope), it would look as if our precaution regarding the ventilation of queen-cages is not necessary.

When I heard that the queen was safely in Canada, I again wrote to the postmaster at Suspension Bridge, thanking him for so kindly returning the queen to me instead of detaining her until dead, or sending it to the dead letter office. I also showed him from letters in my possession, and from clippings from the bee-papers, that queens were passing through other postoffices to Canada, and asking if he could not allow queens to pass until arrangements could be made and a new law rendered which would allow queens to pass legally. I also asked him how he came to stop queens now when he formerly let them pass. Here is his reply:

"Suspension Bridge, N. Y., June 4, 1886.—G. M. Doolittle—Sir: Your letter of the 2d at hand. I am sorry I cannot allow your bees to pass into Canada. We have allowed them to pass until quite recently, and then stopped only on receiving a letter from Washington from the superintendent of foreign mails. I shall at once refer your letter to the Department, and hope they may make satisfactory arrangements.—Wm. Carr, P. M.—per D."

I have written to the Department to see what can be done, for I have orders waiting for some 25 or 30 queens, with more still arriving nearly every day. As the matter now stands, Suspension Bridge is barred against us, and as most of the mail to Ontario passes there from the East and South, our traffic must stop unless something can be done. Now, brother bee-keepers, let us arise and unfold our hands, and make such a "racket" that something will be done. As Prof. Cook did us such good service when the mails of the United States was closed against queens, I would suggest that he, by the authority of the Bee-Keepers' Union, negotiate with the Department at Washington, and in Canada, to see if we cannot be protected by a law to the mutual advantage of our industry in both these countries. What say you, friend Newman?

Borodino,⊙ N. Y.

[See editorial note on the foregoing article on page 403.—ED.]

Convention Notice.

☞ The 5th regular meeting of the Hill County Bee-Keepers' Association will be held on the first Tuesday in July, 1886, at the apiary of Hon. J. M. McDaniel, of Peoria, Tex. At the same time and place will be held a bee-keepers' honey picnic.

H. A. GOODRICH, *Sec.*

For the American Bee Journal.

Bee-Keeping in Tennessee.

E. C. KEMPER.

The past spring was very backward and wet, but when it did open up it came off very dry, so that bees gathered but very little honey from poplar, which is counted our best flow here. Yet we have some white clover here which began to bloom about May 10, and yielded finely for a few days; but it has rained the most of the time since—28 days out of 30.

I have about 250 colonies of bees all in movable-frame hives, and have only taken off about 1,000 pounds of honey. I am afraid if this weather continues two weeks longer I will be obliged to feed. Sour-wood is just coming into bloom, but unless the weather becomes settled very soon there will be no honey gathered from it; that is about the last that we can expect any surplus from, as the fall flow is very light here; so I consider the honey crop in this portion of the State almost a complete failure for 1886, and while other Northern bee-men are reaping a good harvest, I shall live in hopes that there will be a harvest for us another year.

The bee-business is very much neglected here in the South, and the most of the bees here are kept in "log gums," and are all black bees. I bought 50 colonies of Italian bees, and I am Italianizing all of my bees. I find it quite difficult to get the queens purely mated, as the country is so full of black bees, and especially the sides of the mountains.

Pikeville, Tenn., June 16, 1886.

Prairie Farmer.

Bees Deserting their Hives, etc.

MRS. L. HARRISON.

When a swarm re-issues, the hive should be thoroughly examined to ascertain the cause, for their is sure to be one. If they leave silently and alone, it will generally be found that the queen returned to her former home, and the bees followed suit. Sometimes they leave the hive and cluster, but I have had them take a "bee-line" for the woods on re-issuing. In my early days of bee-keeping a swarm came out several times and clustered; on examining the hive I found the entrance to be much smaller than in the other hives, and they left because the ventilation was insufficient. A swarm once emigrated because the hot sun shone upon the hive the next day after hiving. New hives that have been stored in a close room where there are barrels of kerosene, will acquire an odor that is distasteful to bees, and they will desert them.

While writing the foregoing, I saw, through the window, that a large swarm of bees had clustered upon the body of a small cherry tree, surrounded by raspberry bushes. Hiving bees from the bodies of trees, fences and stumps is not the pleasantest work in the world, but it must be met occasionally. I covered the raspberry bushes with a sheet, and shook the bees into a dish-pan, which I covered with an apron and carried them to the hive prepared to receive them. After I thought I had most of the bees hived, I discovered a large cluster at the foot of the tree, and another on the fence, and had to bring the hive there, and drive them into it with smoke. If they had clustered upon the branch of a tree, they could have been secured easier.

Some bee-keepers claim to be able to entice bees to cluster wherever they want them to. I have tried these bee-bobs, time and again, and have never been able to get the bees to notice them; have fixed up devices resembling small clusters of bees, and with bees strung on threads hanging from them, all to no purpose. I once found a colony of bees with worker brood, but too much drone. The bees were diminutive. I took a new hive, brushed the bees off the combs and put them in it, placing it where the old one stood, with a queen and drone excluder in front, thus preventing their entering the hive. These frames contained brood only; these were put in the centre of the hive with division-boards each side, after shaving the heads off the drones, with an uncapping knife. I pinched the head off the queen, and destroyed the drones as they were prevented from entering the hive by the excluder. The bees will build queen-cells, and when they are capped I will destroy them, and give them others ready to emerge, reared in good colonies. There is as much difference in bees as in other stock, and those who keep them for profit, cannot afford to keep scrubs. All inferior colonies should be weeded out, and this can be done by destroying only one bee, the queen or mother. New blood should be introduced yearly into the apiary by a few queens from reliable breeders.

In walking among the hives, I noticed in front of one of them a ball of bees as large as a walnut. I conjectured that a queen was in the centre of this nucleus, and poking off the bees, and thereby getting several stings, found I was correct. I caught the queen, held her in my closed hand, and procuring a queen-cage to put her in, went into a closed room before a window, so if she got away, she could be caught upon the glass. I did not discover the colony to which she belonged, as all the bees I offered her to, rejected her; so I introduced her into a queenless colony.

To save a queen when balled, throw the entire mass into water; then self-preservation will occupy the attention of each bee, and she can be picked out without danger from stings or of injuring the queen. It is risky to pick off the bees from a balled queen, as they in the excitement are liable to sting her. Queens do not sting, but the sensation of holding one in the closed hand is peculiar.

The first swarm of this year issued May 22. There would probably have been earlier ones if brood had not been taken from the strong to build up the weaker. This swarm issued about noon and clustered upon a small peach tree. I took a hive full of frames of comb and put it near the cluster, with a broad cover in front of it, and scraped off some of the cluster with my hands upon the cover in front of the hive, and drove them in with a little smoke. When they had all entered the hive, I placed it upon its summer stand. Some bee-keepers recommend putting a frame of unsealed brood into the hive of a swarm to prevent its leaving, as bees do not desert uncapped brood. I have never found this necessary, as bees will seldom desert a clean, cool hive, placed in the shade as soon as put in it. If old hives are used, they have heretofore been thoroughly cleansed; if new ones, rinsed with cold water to remove dust and freshen them.

Peoria, Ills.

For the American Bee Journal.

The Caucasian Bee.

H. E. HILL.

Having had the pleasure of spending the season of 1885 in the "Woodstock Apiary," of J. B. Hall, in Canada, I took great interest in observing the results of the numerous experiments which were constantly being made. Of those affording the most intense interest was the Caucasian bee. They are a trifle smaller than the common bee, are very dark, with a distinct silvery band bordering each segment of the abdomen, and, in mass, present a bluish cast.

They do not seem to know how to gather honey. One of the assistants thought that "they went to the field to get what they wanted to eat in the honey season, and came home without any." Although they are accused of being unprolific, I believe they can rear more queens and drones to the square inch than any other race of bees in America. If the apiarist is so kind as to furnish them with plenty of nice honey (for it is a fact that they will gather scarcely enough to subsist on, when other colonies are getting from 10 to 20 pounds per day), their energy in building queen-cells is remarkable. Queen-cells stuck to both ends of each comb and were scattered promiscuously over the sides of not only the combs, but actually attached by the dozen to the *sides of the hive;* then up-stairs in the section-boxes until the apiarist has queen-cells "by the pound."

Another peculiarity (but one in their favor) is their gentle disposition. The Caucasian is the strain of bees to which Mr. Hall referred at the Ontario Bee-Keepers' Convention held at Toronto, on Sept. 10, 1885, when he said "they were the quietest bees he had ever handled." But somehow the BEE JOURNAL's correspondent, on page 579 of the volume for that year, makes him to say "Carniolans" instead.

I think that it would be impossible to handle them so roughly as to cause them to attack and sting the operator; but do not think that "they can't;" for if by any means one should be squeezed or otherwise forced to do so, the operator would soon be convinced to the contrary. They appear to be very hardy winterers. As Mr. Hall did not value them at all after having tested them, he took no pains in preparing them for winter; but notwithstanding the disadvantages with which they had to contend, they came through the disastrous winter of 1884-85 in good condition.

When crossed with Mr. Hall's "comb honey" bee, they are very prolific as comb-honey producers, and are beautiful as well as gentle. With these bees the apiarist runs no risk of being left with unfinished comb honey on hand after the honey season, even though they might have had one or two extra supers during the whole season.

In entering the sections they occupy one row across the super (or perhaps two rows, or even more if the colony is very strong), leaving other rows having foundation without touching it. Sometimes, after finishing several supers, and the season is nearly closed, if another is given them in removing them, the apiarist will find one row (perhaps across the end of the super) nicely finished without having drawn out any other foundation. Honey capped by these bees is easily distinguished from any other. The cappings do not show the side-walls of the cells, as does that capped by other bees; but it presents a flat, wrinkled appearance.

Titusville,⊸ Pa.

For the American Bee Journal.

Spiders and Empty Combs, etc.

8—JOSEPH BEATH, (19—29).

In answering Query, No. 258, I was surprised that there was not one of the answers that mentioned the plan made known by Father Langstroth last year, in the BEE JOURNAL, namely, introducing spiders where the empty combs are kept, to eat the moth or miller's eggs. I stored mine in supers and piled them one on top of the other, last fall, and left them there until I wanted them this spring. I put the last in use a few days ago, and I did not see a sign of moth. They were piled in an empty bin in a granary, and as soon as I could find spiders in the spring I put one or two in each pile, and by that time I found they were going there themselves.

My supers are simply boxes the size and depth of the hive without top or bottom, so that the spiders could go from top to bottom through each tier. I have just examined a box of pieces of comb that was beside the other, but was closed until a couple of weeks ago, and I found only a sign of moth, and this after having a very early and warm spring, so that I have corn now in tassel.

Bees have been booming here for nearly three weeks on white and Alsike clover, but the first few days it came into bloom the bees were killing drones. It had been very dry, but we then had a good shower, and the bees began to hum. We have had a shower once a week since, so they are still happy—and so is their keeper.

Corning, ♀ Iowa, June 17, 1886.

The Bee-Moth.

Mr. C. W. Banker, of Menomonee, Wis., asks the following about the bee-moth, dated June 17, 1886:

I would like to ask through the BEE JOURNAL how the moth gets into the hive. I am told that moth eggs are deposited first in the flowers, and then gathered up in the pollen by the bees, carried to the hives and deposited in the cells with the pollen, and there hatched out into moth worms. If this is so it would be worth a good deal to me to know.

We cannot do better than to quote the following from Prof. Cook's Manual, in order to satisfy our correspondent:

The bee-moth (*Galleria Cereana*) belongs to the family of snout moths, *Pyralidæ*. This snout is not the tongue, but the palpi, which fact was not known by Mr. Langstroth, who is usually so accurate, as he essayed to correct Dr. Harris, who stated correctly, that the tongue, the ligula, was "very short and hardly visible." This family includes the destructive hop moth, and the noxious meal and clover moths, and its members are very readily recognized by their unusually long palpi, the so-called snouts.

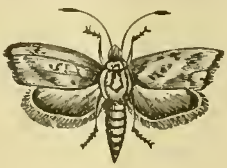
Fig. 1.—Bee Moth.

The eggs of the bee-moth are white, globular and very small. These are usually pushed into crevices by the female moth as she extrudes them, which she can easily do by aid of her spy-glass-like ovipositor. They may be laid in the hive, in the crevice underneath it or about the entrance. Soon these eggs hatch, when the gray, dirty-looking caterpillars, with brown heads, seek the comb on which they feed. To better protect themselves from the bees, they wrap themselves in a silken tube, which they have power to spin. They remain in this tunnel of silk during all their growth, enlarging it as they eat. By looking closely, the presence of these larvæ may be known by this robe of glistening silk, as it extends in branching outlines along the surface of the comb. A more speedy detection, even, than the defaced comb, comes from the particles of comb, intermingled with the powder-like droppings of the caterpillars, which will always be seen on the bottom-board in case the moth-larvæ are at work. Soon, in three or four weeks, the larvæ are full grown. Now the six jointed, and the ten prop legs—making sixteen in all, the usual number of caterpillars—are plainly visible. These larvæ are about an inch long, and show, by their plump appearance, that *they at least*, can digest comb. They now spin their cocoons, either in some crevice about the hive, or, if very numerous, singly (Fig. 3, *a*) or in clusters (Fig. 3, *b*) on the comb, or even in the drone-cells (Fig. 3, *c*) in which they become pupæ, and in two weeks, even less, sometimes, during the extreme heat of summer, the moths again appear. In winter, they may remain as pupæ for months. The moths or millers—sometimes incorrectly called moth-millers—are of an obscure gray color, and thus so mimic old boards, that they are very readily passed unobserved by the apiarist. They are about ¾ of an inch long, and expand nearly 1¼ inches. The females are darker than the males, possess a longer snout, and are usually a little larger. The wings, when the moths are quiet, are flat on the back for a narrow space, then slope very abruptly. They rest by day, yet, when disturbed, will dart forth with great swiftness, so Reaumur styled them "nimble-footed." They are active by night, when they essay to enter the hive and deposit their one or two hundred eggs. If the females are held in the hand they will often extrude their eggs; in fact, they have been known to do this even after the head and thorax were severed from the

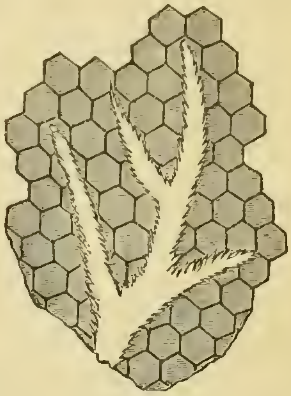
Fig. 2.—Moth-eaten Comb.

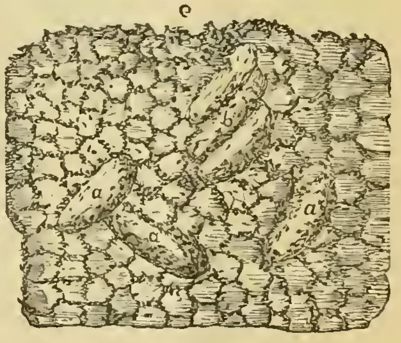

Fig. 3.—Cocoons.

abdomen, and still more strange, while the latter was being dissected.

It is generally stated that these are two-brooded, the first moths occurring in May, the second in August. Yet, as I have seen these moths in every month from May to September, and as I have proved by actual observation that they may pass from egg to moth in less than six weeks, I think under favorable conditions there may be even three broods a year. It is true that the varied conditions of temperature—as the moth larvæ may grow in a deserted hive, in one with few bees, or one crowded with bee-life—will have much to do with the rapidity of development. Circumstances may so retard growth and development that there may not be more than two, and possibly, in extreme cases, more than one brood in a season.

It is stated by Mr. Quinby that a freezing temperature will kill these insects in all stages, while Mr. Betsinger thinks that a deserted hive is safe, neither of which assertions are correct. I have seen hives, whose bees were killed by the severe winter, crowded with moth pupæ or chrysalids the succeeding summer. I have subjected both larvæ and pupæ to the freezing temperature without injuring them. I believe, in very mild winters, the moth and the chrysalids might be so protected as to escape unharmed, even outside the hive. It is probable too, that the insects may pass the winter in any one of the various stages.

For the American Bee Journal.

Another Canadian Apiary.

R. F. HOLTERMANN.

Another Canadian apiarist who has for quite a number of years attended the North American Bee-Keepers' Conventions, and is known to many, is Mr. S. T. Pettit, of Belmont, Ont., President of the Ontario Bee-Keepers' Association. Like Mr. Hall, of Woodstock, Ont., Mr. Pettit can rarely be induced to contribute to a bee-paper. He is a strong advocate of the idea that bee-keeping should not be held up in too bright (or perhaps in bright) colors, and no one should be induced to become a bee-keeper—if anything, *discourage the idea a little.*

Mr. Pettit's bees, consisting of some 80 colonies, were apparently in very good condition, his winter loss being 2 colonies. The bees have heretofore been wintered on the summer stands with a rough clamp about them, which gives ample packing all around; but material was already upon the ground for a cellar with a frost proof honey-room above, and in future the calculations are that the bees will be wintered in-doors. The reasons given are: As our country becomes more and more devoid of forest and shelter, the climate becomes more and more unsuitable for our bees, and to obtain the best results Mr. Pettit thinks that we must winter our bees in-doors.

The hive used by Mr. P. has a wider frame than the Gallup, and I think slightly less shallow. Like in Mr. Hall's apiary, the lower story is disturbed but little; perforated metal is used between the lower and upper story, and from the latter the honey is extracted. The honey is permitted to be pretty well capped before extracting. The system of extracting before the honey is ripe, and evaporating in cases has been tried with the result being an inferior honey, and has been discarded.

Mr. Pettit has a fairly good locality. On his farm, which his son works, there are some fine linden trees; Alsike clover, too, has been grown successfully, yielding a very handsome return. I was a little surprised that Mr. Pettit should have let his neighbors know about the profit to be derived from raising Alsike clover seed—the market for it, like the honey market, might become glutted in consequence; certainly many in the vicinity are sowing it. But it only shows us that even our shrewdest men will, in unguarded moments, "let the cat out of the bag."

Mr. Pettit's results, as to honey yield, are about the same as those of Mr. G. M. Doolittle.

Feeding sugar to the bees for winter stores has also been resorted to, but discarded. The result of such feeding was that some men looked with marked suspicion upon the practice; then, as a bee-keeper, it was throwing so much more honey upon the market, and when it required more of an effort to dispose of honey, the entire transaction from its various stand-point was considered injudicious and unprofitable.

I here saw a case of drones having wintered in a colony not queenless. Mr. Pettit says it will occur rarely, as they disappear within a few days.

Brantford, Ont.

For the American Bee Journal.

Queens and Swarming.

J. H. ANDRE.

I noticed on page 379 of the BEE JOURNAL, Mr. O. P. Miner's open questions. In regard to piping of queens before the old queen leaves the hive, I am not sure, neither am I sure of a young queen hatching before the old queen leaves the hive, but it is quite probable they do on many occasions. In a good, strong colony that would cast a swarm on the morrow, providing the weather was suitable, and if one of those long-continued cold storms come on that we sometimes have at summer solstice, which might keep them back two or three days (for first swarms hardly ever come forth in bad weather), it would be nothing strange if a young queen should leave the cell, and the hive also, with the first swarm. I do not recollect of ever seeing more than one queen with a swarm, which I was sure was an old queen, but I have seen as many as five queens in plain sight at once with one swarm, and a small one at that.

I do not believe queens ever make war upon each other in the parent colony, no matter how many there may be after they come forth from the cell. I think that is the reason they sometimes have such a swarming fever, and keep it up until there is only one queen left, and leave the colony so weak that it is an easy prey for swarms. Last season I had a colony that cast five swarms. I think that a young queen came out with the first swarm, met the drone, returned to the parent colony and deposited a few eggs, and the last swarms were her offspring instead of the old queen's.

The queen is superseded much oftener than most bee-keepers imagine. Last season fully one-half of my first swarms had young queens. Quite often a colony will swarm every other day, and sometimes each day, until they have cast three or four swarms (small ones). This is caused by a loss of the queen, superseding, or otherwise. It is always best to return one or two of the last swarms, where more than two are cast, unless increase is wanted, and then there is a chance of giving up the old colony to worms, and the weak swarms will hardly ever pull through the winter.

I hardly ever have any trouble in putting two or three small swarms together; if they are agitated too much, smoke them a little, and sprinkle them with water every time they act like separating. After they have been in the hive one night, they rarely ever separate. A few days ago I had a colony cast a third swarm. It was in one of these nuisances, a box-hive, and as I had fixed a case on it containing 18 sections, and was calculating on getting some surplus from it in a week or two, I left the swarm about six quarts of bees, which came out at 2 p.m., and the next day at 7 p.m. I returned it, and it gave me no further trouble.

I have seen it stated by several that it did not pay to feed colonies in the spring that were in fair condition. I think that depends on circumstances, but of one thing I feel assured, I can get surplus earlier by feeding, than without. Early feeding will fill the brood-chamber, or at least keep the stores good, and will stimulate early breeding. Discontinue feeding at the time fruit begins to bloom. They will hardly ever start queen-cells in this latitude until clover blooms. The feeding and fruit bloom together will give them plenty of stores and brood, which will be hatched, and will be of just the right age to gather the crop of clover honey. One of my colonies gave me 40 pounds of surplus by June 17, and is now busily at work on 32 small sections. This is by the natural work of the bees too, without any contracting of the brood-chamber. If the season is good, I will divide it when they get the second case full, and then try and get 30 pounds from each during the buckwheat bloom, which will satisfy me, making 130 pounds from one colony, and one good swarm, without any labor, only by dividing, and putting on and taking off the cases.

Lockwood, N. Y.

Read at the Rhode Island Convention.

Alsike Clover, Honey Ripening, etc.

SAMUEL CUSHMAN.

All writers for agricultural and bee papers agree as to the superior qualities of Alsike over other clovers for pasturage or honey, having fine stalks and little woody fibre it is eaten clean by all stock and yields heavily, often producing three tons of good hay per acre. It is said as a fertilizer for land it has no superior if an equal. While it pays well as a farm crop, it is also our best crop for honey, and all bee-keepers recommend it in the highest terms, as will be seen by reading the reports of all the bee-keepers' conventions held last winter. It is claimed that as great yields may be obtained from it as from basswood, and the quality of honey much superior.

J. M. Hicks, of Battle Ground, Ind., says in a late article in the *Canadian Bee Journal:* "We have no hesitancy in saying that Alsike clover will produce 500 pounds of the richest and best honey per acre in a good season." As a seed crop it pays well, the seed bringing from $6 to $7 per bushel, and an acre frequently yields 4 bushels of seed. Mr. C. M. Goodspeed, of Thorn Hill, N. Y., gives the net profit on his crop as $60 per acre, and speaks of the hay as the best he ever fed.

If the bee-keepers of Rhode Island are to supply the State they will have to offer something better than dark honey, and if each one will distribute among his neighbors every spring a bushel or two of this clover, I believe we would soon be able to compete with any honey in the country, and to keep 100 colonies with profit in the same area that now supports but ten. Vermont produced 160 tons, and Maine 192 tons of honey the past season, and much of it was from clover.

Alsike clover does best on clay or wet land, and is sometimes unsatisfactory on dry or light soil. It is said to be hardy, and does not easily winter-kill. From 4 to 6 pounds are sown per acre. Part of the piece can be mowed before it blossoms, and fed to stock. It will then blossom late after the usual bloom is over. From this it would be seen that by a comparatively small outlay we will get it back a hundred fold, besides benefitting the parties who raise the crop.

The poison of the bee is found to be mostly formic acid, which we are told is a great preservative, and that the raw nectar of flowers, mostly natural sugar and water by evaporation, and the addition of this acid by the bees is changed to the smooth, mellow sweet known as honey. A plentiful supply of this acid is necessary or the change will be slow and imperfect It is also said that bees are able to cure foul brood and similar diseases by its use.

Now it is not proven that a gentle bee has a deficient secretion of formic acid, or that bees that sting readily have any more; but until we know more about it, I shall favor this view, and shall not object to stinging bees as long as I am able to protect myself from their venom when they are disturbed.

Much honey is capped that is not ripe, and is sold in that shape; but it is much oftener the case with extracted honey. Evaporation may thicken, but I cannot believe it will ripen it. When working for comb honey I shall depend upon hybrids, but if working for extracted honey or keeping bees for pleasure, I should keep pure Italians.

Pawtucket, ♂ R. I.

For the American Bee Journal.

Inventions—"Axes to Grind," etc.

JAMES HEDDON.

Number 25 has just been laid upon my desk. Seeing the name of C. W. Dayton (who wrote an article in last *Gleanings* relative to the rights of bee-keepers, which I should like to see copied into the AMERICAN BEE JOURNAL), I at once read the article which relates to my favorite branch of apiculture,—hive-construction. While from my stand-point I do not conceive that the arrangement he describes is at all practical, that it will ever meet the wants of producers of honey, yet I am conscious that I may be in error, and I am glad to learn that Mr. D. recognizes his right to the results of his labors, prove they more or less.

But I wish to take issue with him in regard to the "ax to grind" statement, found near the close of his article. I do not see why he should acknowledge any such motive. If he wrote for the purpose of extolling the merits of the manufacture described, with a pecuniary end in view, I should call that "an ax to grind," but simply because he is the inventor and patentee of what he believes to be an improvement in one art, does that rightfully exclude him from giving his best thoughts to us? We want the best he knows. We acknowledge his right to the patent, and we expect nothing else than that he would patent the result of his best thoughts.

One editor complained that my book was too much like an advertisement; that it described and extolled one hive, and that was the one I used; one I had invented and patented. Well, is that strange? I know that some other books illustrate and describe numerous hives, and rather leave the reader to "choose ye"—partly in the dark, not only as to which might be the best hive, but even which the writer thinks is best. As I stated in the introduction to my book, I wrote it from my own standpoint of 18 years' experience as a specialist; not to take the place of any other work, but merely to supplement the several good books already out.

Should I write a book and omit the most important branch of the industry; the one which I had made a special study—the hive? Surely not. Well, as I desired to make the work as short concise and cheap as possible, should I have described a lot of hives I considered inferior? If so, should I have stated that I so considered them? What would the gentleman have said then? Have I not the same right and duty before me to state my choice in hives as well as queen-cages or methods of preventing after-swarms?

If I do place before the reader what I claim to be the best hive, should not that claim accord with my honest belief? Would I patent a hive which I thought inferior, and thus intentionally throw away my time and money? If I sell a hive should I not sell the one I thought valuable enough to patent and use? Should I patent and use one and sell another? I thought, and still more firmly believe that my new hive is the best bee-hive ever used. If I had not, I should never have patented it.

Will some one please tell me what I should have done about the hive-matter when writing a book, the inspiring motive of which undertaking was to describe implements and methods that would prove a help to the reader, more and more practical as time rolled along, and do honor to the writer?

I wrote this argument in reply to the unjust editorial, but it was refused a place where the readers of the former could see it. I hope that some who read that will also read this article. The charge was utterly ill-founded, and very easily proven so, but I could not be heard.

I desire to say that the AMERICAN BEE JOURNAL is the only paper in which I have always been allowed the rights that I thought belonged to me—the only place where I could hold a successful controversy with the editor when I had the right on my side, and the ability to prove it. I am by no means the only complainant. It is but just to add that in late years *Gleanings* has done me justice. Let us be honest, fair and just. Let us be friendly, and be very careful of how we allow jealousy to warp our judgment. We can be plain, bold and vigorous in our discussions of important principles, and yet not be false to ourselves or others. To claim as our own that which we know belongs to another, to impute false motives to another, are all soul-stains that are not good to sleep with.

Dowagiac, ♀ Mich.

For the American Bee Journal.

Seasonable Suggestions.

H. O. KRUSCHKE.

We have bee-associations without number, and although it is a good thing to commune with the fraternity, I would like something more practical; something that will yield dollars and cents. Let us make up and offer large prizes for information that will create a greater demand for honey; apply it to various uses for which it is not now employed. Would it not be good if a drink was made that would be as freely drank as lemonade? It could be made in extensive establishments, shipped in kegs or bottles! How to make the best vinegar so that it can be made to rival cider vinegar. Give $1,000 or more if something good can be attained. Give enough so that our best scientists will experiment in that line.

I have also thought we should have suitable receptacles in which to sell our honey, so that it may be placed directly on the table (I mean extracted honey). A vessel which will show at a glance that it contains honey; no reading of label or word from the landlady. For instance, a glass bee hive of the old straw pattern, with a large queen-bee for faucet at the fly-hole. By pressing or lifting the wings between the thumb and finger, the honey may flow from the queen's mouth. Such a thing would take. It could be made of silver or gold, and be an ornament on any table. When once such a receptale is owned, it will be kept filled with *honey*. No one would debase her or himself by putting syrup in it. Or, again, make them like syrup cups new in use, but for the top there should be a bee-hive; also the word *honey* in gold in front of the body of the cup, fixed between the glass as fancy saloon bottles are now made.

Believe me there is money in the above suggestions, more than in discussing "theories" or "problems."

Necedah,⊙ Wis.

Local Convention Directory.

1886. *Time and place of Meeting.*

July 6.—Hill County, at Peoria, Tex.
H. A. Goodrich, Sec., Massey, Tex.

July 16.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12–14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Immense Flow of Honey.—Wm. Bitzer, Wheeling,♂ W. Va., on June 17, 1886, says:

During the past week we have had an immense flow of honey from white clover. At present it is very cool, but the prospect is fair for a good crop of most excellent honey.

Building Worker Comb.—Charles Mitchell, Molesworth, Ont., on June 23, 1886, writes:

I have been innocently following the advice of Mr. W. Z. Hutchinson, in answer to Query, No. 264, by hiving large first swarms on 6 empty frames with starters ½-inch wide, and on the sixth and seventh days putting on upper stories; and I thought I was stealing a march on the use of comb foundation. However, I am always a little suspicious, and looked into the hives to see what was going on, when to my disgust I found that they were completely ruined. There was not a worker comb the size of my hand, in the six hives. Had I followed the same advice this season I should have lost from $300 to $500 this summer, all for saving the cost of a few pounds of comb foundation. I have bought 100 pounds of comb foundation, and I fully believe that the man who cannot buy a few pounds of foundation had better let bees alone.

Virgin Queens, etc.—E. C. Kepner, Pikeville,⊶ Tenn., on June 22, 1886, answers the open questions on page 379, thus:

To the first I will say, yes, when the hive contains a virgin queen. I say yes to the second question. This will occur during continued wet or cool, cloudy weather. I also say yes to the third question; this occurred in my own apiary but yesterday. I had a swarm come off with a virgin queen, and also an old queen, as I keep my old queens' wings all clipped. I was at the entrance of the hive soon after the swarm began to issue. The first queen that came out was a virgin queen, and soon after the old queen came forth. On examining the hive I found several young queens just ready to hatch.

Bee-Keeping in Mississippi.—20—L. J. de Sobotker, (85–83), Riverton,⊸ Miss., on June 15, 1886, writes:

Since the last week in May we have had fearfully hot and sultry weather—90° to 95° in the shade. The bees have lost a good deal of time between 8 a.m. and 4 p.m. daily for over a week. They actually clustered outside the hives in such a manner that a novice would certainly have thought that they would all soon be going to the woods, and leaving the hives empty—empty of bees they certainly were from 9 a.m. to 3 p.m. on several days, and I felt afraid that if such heat should continue much longer, that the brood would be injured and the combs commence to melt. Just as suddenly as the great heat had come on so suddenly on June 3 the temperature lowered 24° in a few hours, and then changed to bleak, chilly weather. This the bees did not relish either, as they kept out of sight in the hives enjoying, I suppose, the fruits of their toils during the early mornings and late evenings of the hot spell; however, now they are quite busy again, and there is no noticeable check in the flow of nectar from the fields. I have also been troubled a good deal with robbing, especially with those that had been left in box-hives after dividing; but in one day I stopped them by wetting thoroughly a large bunch of grass and putting it in front of the entrance for a few hours, and continuing to sprinkle the robber bees with water. Toward sunset I took a strip of glass 6 to 8 inches long and 2 inches wide, and placed it on edge against the front of the hive over the entrance, so that it made a very narrow passage-way at either end, and that would only admit a couple of bees at a time. This gave the robbed bees a chance to fill up the passage and keep the robbers at bay, which effectually broke up the robbing. The weather is now good, there is a profusion of bloom, plenty of nectar in the field, and the bees are doing well.

Report. — B. Betten, Goodell's,⊶ Mich., on June 21, 1886, writes:

I bought a 2-frame nucleus on July 21; the bees wintered well and have increased to four strong colonies. I think I can increase them to ten this season all right. The honey-flow is good here.

[Ten colonies from one nucleus is too much. You will be very likely to lose them all next winter.—Ed.]

That New England Lawsuit.—Marshall Darling, Waterbury,♀ Conn., on June 21, 1886, writes:

My lawsuit in the District Court has not been tried yet. It has been postponed twice now, but it will be tried, I think, on June 28. My bees have never done better at this time of the year than they are doing now. White clover is plenty here this year. I have had 5 swarms. I have sold some of them and have 12 colonies left.

Preventing Annoyance by Bees.—C. H. Dibbern & Son, Milan,⊸ Ills., on June 17, 1886, write:

From reading the statement of Messrs. Thos. and Benj. Young, on page 379, it seems evident that they are somewhat to blame themselves. If we expect to keep large apiaries in towns and cities, and remain at peace with our neighbors, we must manage them so that they will trouble other people as little as possible. It will not do to let the bees swarm all over town, and get people all "stung up." If they cannot keep their swarms from getting mixed up, and straying off, they should use a few swarm-catchers or otherwise divide, or keep them from swarming. Some have condemned the catcher, but we have used for years four or five of our own make, consisting of nothing but an oblong frame with wire-cloth on three sides, and cloth tacked on the open end, and we find them a grand thing.

Such a fence as mentioned might be some protection for driving near the apiary, but a row of rapid-growing trees formed into a hedge would be much better. By a judicious planting of trees, bees can be made to fly where we want them, to a great extent. We have over 200 colonies in a box-elder grove, and compel the bees to fly straight up through open spaces. When bees are once high in the air, they will not bother to come down again to annoy anything. If we wish to keep people from complaining, we must do all we can to remove the cause.

Feeding Sugar — Uniting Weak Colonies.—W. Z. Hutchinson, Rogersville,☌ Mich., says:

Some of the grounds upon which the feeding of sugar to bees is opposed are a trifle amusing to say the least. Much is said about honey and pollen being the natural food for bees, hence no trouble should arise from *that* source. Did bees never perish when left to "their own sweet will" in *all* things, this argument would be more forcible; but when undisturbed by man's reason, the bees meet an untimely fate, it is evident that nature has made a mistake somewhere. I have united weak colonies in the spring and supposed that it was better to do so. Mr. Doolittle's views upon this subject, as given on page 373, are reasonable. I think that this is one of the best articles that Mr. Doolittle has given us for sometime.

Swarming Fever. — H. H. Flick, Lavansville,♀ Pa., writes:

The season thus far has been good. The clover yields honey in abundance, and the bees are in good condition. I have been experimenting for a number of years to prevent swarming, and I have succeeded to a certain degree. I have settled wintering long ago. Now, if I can fully control the swarming impulse, bee-culture will be very much pleasanter and more profitable. It can then be reduced to a sure thing, all except the weather governing the honey-flow. I have always found a flow of honey sometimes during each season, and if the bees are then in good condition they will get a good supply.

Returned Swarms. — L. T. Hill, Canton,○- Dak., on June 20, 1886, writes:

On June 7 I had a second swarm of bees come out, and in their flight passed over the hive that contained the first swarm that came out, and about one quart clustered on the front of the hive and on the ground in front, and went into the hive. After watching them for awhile I noticed a few bees flying about 40 feet beyond, and, after looking there, I found the swarm. I thought when I saw them clustering on the front of the hive that they were the swarm. On the 8th of this month a neighbor had a swarm come out and cluster; he hived them, and in about half an hour they came out, and followed the bank of the Big Sioux river, and went on over the river and across the prairie into Iowa. They were gone about two hours and returned and clustered within 20 feet of where they did the first time. He put them into the same hive,and they remained. Has any one noticed similar cases? Bees have done remarkably well here since the first of May; never have done better in this county.

Home Market for Honey.—C. W. Dayton, of Bradford,☌ Iowa, on June 15, 1886, writes:

I shall not neglect my home market; that would be money out of pocket. A large share of my last year's crop was sold in ½-pound and 1-pound tumblers at a net price of from 11 to 14 cents per pound, and this season I will sell all I can produce in that way. Nice, clear honey in small glasses, having a small but showy label, is the best ornament with which enterprising grocers can ornament their show-cases, as its coming between the observer and the light it appears much more beautiful than gold itself. City folks like nice things, so I am going to give them some at a small but round price in glass jars. I cannot now call to mind but one store where I could not make a sale of some of these packages. There are three-story hives in my apiary containing 30 combs that are entirely filled with brood and honey; ready for a fourth story. Last year at this time I had to feed my bees to keep them from starving. The honey-flow began on June 7—ten days earlier than usual.

Making Division-Boards, etc.—6—J. M. Dondna, Alexandria,+○ Minn., on June 11, 1886, writes:

I put 58 colonies in the cellar on Nov. 1, 1885, and took them out on April 20, 1886, without the loss of one. I united four weak ones; the balance were in splendid condition—not a case of diarrhea among them. They had natural stores. Only a few had any brood in the combs. The season has been very good thus far. I had 2 swarms on May 22, and about 40 up to this time. I notice E. B., in Query, No. 261, wants to know how to make a division-board. This is the way I make it: Cut a ⅞-inch board ⅜ of an inch shorter than the hive, and as deep as the frames below the top-bar. Nail a flat top-bar on this, and get thin sheet rubber, such as is sold for steam packing; it is about 1-16 of an inch thick. Cut it in strips ½-inch wide. Tinner's squaring shears do it nicely. Nail it on the side of the board, letting it project ¼ of an inch. Lay a fold of cloth on the top and put on the honey-board. The rubber will cost less than one penny for each board, and is far superior to old rubber boots. The prospect for basswood bloom is very good.

◆

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 28, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Honey of all grades sells slowly at present, and prices are weak—14@15c. being the outside figure for best comb honey. Extracted is in light demand at 5@7c. California comb honey, in 2℔. sections, 9@12c.

BEESWAX.—25c. for good yellow.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white,6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The first new comb honey of the season—a sample lot of extra choice—brought 14 cts We quote: White to extra white comb, 11@14 cts.; amber, 7@10c. Extracted, white liquid, 4½@5c.; light amber colored, 4 to 4½c.; dark amber colored, 3½ to 3¾ cts.

BEESWAX.—Quotable at 20 to 24 cts.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—There is a little new honey in the market, and is selling at 13 cts. for white in 1-lb. sections. The demand is limited, however.

BEESWAX.—Firm, at 25 cts. per pound.

M. H. HUNT., Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 5@5½. Fermented goods, 2½@3c

BEESWAX.—Firm at 22c for prime.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—The demand for extracted honey has been very light of late, but it seems to be improving gradually for manufacturing purposes. There is considerable honey in the hands of commission merchants, and prices are very low—3½ to 7 cts. per pound is the range of prices. Prices of comb honey are nominal.

BEESWAX.—Arrivals are good and the demand fair. We pay 18@22c. for fair to choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted. 5@6c.; Southern, 3½@4c.

BEESWAX.—23c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market seems quite dull for all qualities of comb honey, with but a moderate demand for extracted. We quote: Choice, white 1-lb. sections, 17@18c.; the same in 2-lbs., 16@17c.; dark 2-lbs., 15@16c. Extracted, white, in barrels or kegs, 7@8c.; dark, in same packages, 6@7½c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—Heavy arrivals and a weak market is quoted. Competition is confined to sellers. The choicest extracted is being offered at 4½c., and comb is being urged to sale at correspondingly low figures. There are very few buyers, and none show a disposition to purchase in a wholesale way. White to extra white comb, 9@12c.; extracted, white liquid, 4@4½c.; light amber colored, 3¾@4c.; dark amber colored, 3@3¼c.

BEESWAX.—20@23c.

SCHACHT & LEMCKE, 122-124 Davis St.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

◆

"**Don't Stop**"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

◆

Foundation, Cheap.—We have about 75 lbs. of Comb Foundation for the Brood-Chamber, 4x16½ inches, which we offer at 35 cents per pound. This is an odd-size lot of our regular "Dadant" stock.

◆

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00.

Create a Home Market.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00; or 1,000 for $15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and a Voting Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Voting Blank.

◆

Job Lot of 2-lb. Sections, Cheap.—See our offer of a job lot at $3.50 per 1,000, on page 416. If you can use this size of section, there is a bargain for you. They can be shipped the same day the order is received.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2 00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Special Sizes of Sections cause much confusion; and if such luxuries are indulged in they should be ordered long before the "rush" comes, in May and June. Special sizes cost more, and when ordered during the "rush," create considerable dissatisfaction by the consequent delay in getting them made. We have a lot of special sized two-pound sections 5¼ inches high and 6 inches wide, narrow tops, and square groove, which we can ship instantly at $3.50 per 1,000. They are 7 to the foot.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

◆

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. 1, bound in cloth, $2.50, postpaid.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

A. J. KING'S New CIRCULAR of
CARNIOLAN, SYRIAN and ITALIAN QUEENS sent FREE on application.
A. J. KING, 51 Barclay St, New York.
26E4t

Advertisements.

ITALIAN Bees & Queens at reduced prices. Address, **OTTO KLEINOW,** (Opp. Ft. Wayne Gate), DETROIT. MICH.
25Atf

HONEY-PAILS.—As I will dispose of my honey crop by other methods, I offer my stock of 3-lb. Jones' Pails at **$5.25** per 100. Several hundred of them are labeled, and the first orders will take the labeled ones. **C. W. DAYTON,**
25A2t BRADFORD, IOWA.

THREE-FRAME Nuclei, with Queen, $3.25 each—all pure Italians. Young Queens $1 each. M. ISBELL, Norwich, N.Y.
26A2t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf **J. VANDERVORT, Laceyville, Pa.**

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

W. Z. HUTCHINSON,

Is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows: Single Queen, $1.00: 6 Queens for $5.00; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound). Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.

W. Z. HUTCHINSON,
8Etf ROGERSVILLE, Genesee Co., MICH.

---

6 Warranted Italian Queens

FOR $5; 12 for $9; Single Queen, $1. Sections $3.75 per 1,000.—I. R. GOOD, Nappanee, Ind.
24Etf

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece,
V-Groove, $4 per 1,000
Less for lots of 10,000

40c per lb. for heavy.
50c " " light.
Send for Samples and Price-List.

A. F. STAUFFER & CO.,
15Etf STERLING, ILLS.

ITALIAN QUEENS.

I WILL furnish **Warranted Italian Queen-Bees** for $1.00 each; Tested Queens for $2.00 each. Delivered by mail.

PETER BRICKEY, Lawrenceburg, Ky.
18E10t

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.**, a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,

J. P. H. BROWN.
7E10t AUGUSTA, GEORGIA.

Italian and Carniolan Queens

BY RETURN MAIL.

BRED in separate apiaries away from other bees. Warranted Italian or untested Carniolan Queens, in June, $1.10; 6, $5.90; in July, $1; 6, $5. State which you prefer, **Bellinzona** or **Golden Italians.** For full particulars and prices of Bees, send for Circular. *Satisfaction guaranteed.*

CHAS. D. DUVALL,
24Etf SPENCERVILLE, Mont. Co., MD.

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Colored Maps of all the States and Territories, including Alaska and District of Columbia.

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Histories of each of the States from the Earliest Times.—Descriptive of their Topography, Soil, Climate, Rivers Mountains, Natural Wonders, Population, Area, Islands, Lakes, Mines, Products, Manufactures, Industries, Cities, School Systems, Collection and Exemption Laws, Date of Holding Elections, Number of Representatives, Senators, Congressmen, and Presidential Electors, Number of Union and Confederate Soldiers in the Field, Price of Land Cleared and in Forest, Extent of Forest, Number of Different Callings, Rate of Interest, Usury Laws, PEDDLER OR DRUMMERS' LICENSE LAWS, DIVORCE LAWS, MINING LAWS, DESCRIPTION OF PUBLIC LANDS, LIST OF LANDS SUBJECT TO THE FORMS OF ENTRY, List of Land-Offices, Opportunities for Homes or Enterprise, Rainfall, Health, Ports of Entry, Population (male, female and foreign) Number of Indians, Mineral Resources, Nicknames of States and for whom or what they are named, Miles of Railroad and Canals, Tidal Frontage, STATE LAND LAWS Religious Denominations and their Numbers, Number of Counties and Names.

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Capacity, one car-load per day. Best of goods at lowest prices. Write for price-list.

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By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms: cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information,

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What to Eat,
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Parasites of the Skin,
Bathing—Best way,
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How to Avoid them,
Clothing—what to Wear
How much to Wear,
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Headache, cause & cure,
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IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

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WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

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Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,
DR. C. C. MILLER,
20Atf MARENGO, ILLS.

DOUBLE-WALLED

Langstroth Hives

FOR WINTERING BEES ON SUMMER STANDS.

THEY are made identical and interchangeable with our Standard Langstroth Hives, as advertised and described in our Catalogue. All upper stories and surplus arrangements made by us will fit this double-walled brood chamber. Prices: Nailed, **50c.**; in the flat, **35c.** per hive, in addition to our prices of the Standard Langstroth. We also make our 7½-inch Caps with a sloping or Cottage Roof, which is worth **20c.** nailed and **15c.** flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

THOS. G. NEWMAN & SON,
923 & 924 West Madison-st., Chicago, Ills.

ITALIAN QUEENS, by Return Mail, Tested, 1.00. Untested, 75 cents.
26Atf **GEO. STUCKMAN, Nappanee, Ind.**

ALLEY'S QUEENS.

READY JUNE 1, 1886.

WARRANTED	Queens,	by mail	....	$1 00
"	"	"	per ½ Doz...	5 00
SELECT	"	"	each	1 25
"	"	"	per ½ Doz...	7 00
TESTED	"	"	each.........	1 50

By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.

HENRY ALLEY, WENHAM, MASS.
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ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*

9W1y **J. M. JENKINS, Wetumpka, Ala.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DOWN, DOWN, DOWN!

We Come!

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,
14Wtf **MAZEPPA, MINN.**

A Year among the Bees,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

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BEE-KEEPERS' GUIDE;

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

QUEENS BY RETURN MAIL.

I AM up with my orders and can send QUEENS by return mail. Capacity, 75 to 100 a week. **Six Warranted Queens for $5.00.** I have the finest breeders I ever had. Also English Rabbits $1 a pair.

22Atf **J. T. WILSON, Nicholasville, Ky.**

TESTED Queens, (Imported Mother), $1.25 each; $12 per doz.-O. N. Baldwin, Clarksville, Mo.
4Aly

Lewis' V-Groove One-Piece

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April 15, 1886. 16Wtf

40 CENTS per pound, boxed. VonDorn's Dunbam Brood Foundation. **Circular Free. None Better** **T. L. VonDorn,** *Omaha, Neb.*
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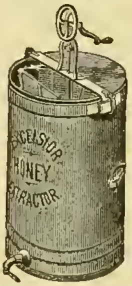
EXCELSIOR

HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

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For 3 "	"	13x20		..........12 00
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SEND $1.25 and I will express 5 lb. Todd's Honey Candies, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's New Book mailed free for $2.50. **ARTHUR TODD,**
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AND BEE-KEEPER'S ADVISER.

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☞ All Queens strictly pure Italians. ☜

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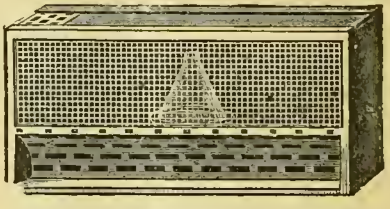

Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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I AM now prepared to supply dealers and others with **Hives, Sections, Shipping-Crates, Supers, etc.,** of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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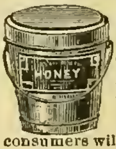
NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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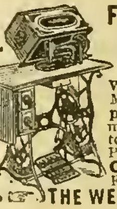

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Newest and Best.
Black Walnut, Drop Leaf Table, Cover 3 Drawers and Full Set of Attachments, only $14.50 Cash or **FREE** for **29 Subscribers to** ☞ **THE WESTERN WORLD.**

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We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. July 7, 1886. No. 27.

Something Beautiful has vanished,
And we sigh for it in vain ;
We behold it everywhere,
On the earth, and in the air,
But it never comes again.

◆

Honey and flour made into a salve is an excellent remedy for boils.

◆

Latest French Statistics on bees and honey are for 1881. Then there were 1,669,759 colonies of bees in France, and the honey product was about 18,000,000 pounds. Wax 5,500,000 pounds. Value 16,500,000 francs, or $3,000,000.

◆

Concerning our pamphlet entitled "Honey as Food and Medicine," Mr. Samuel Simmins, of Brighton, England, writes : "I do not think you can claim too much in regard to the vast amount of good that pamphlet is doing, and likely to do, for the honey trade." Employ it to build up your home market.

◆

Mrs. L. Harrison, of Peoria, Ill., writes us that she has been an invalid for a month past, suffering severely with a diseased condition of her ears and head. It must be very annoying for such a "busy" worker to be unfit for duty in this the busiest season of the year—in the apiary. The BEE JOURNAL hopes for her full restoration to health in a short time.

◆

Honey is an excellent palliation in coughs, colds, sore throat, baby sore mouth, and early stages of diphtheria.

◆

Use of Honey in Cholera Times.—In the *Bulletin de la Societe d' Apiculture de la Somme*, J. B. Voirnot says the constant use of honey is without the slightest danger, even during an epidemic of cholera. He says :

> Honey prevents or cures constipation. The formic acid which honey contains makes it useful in affections of the mouth, throat, organs of respiration and chest. Professors, and all who have to speak in public, should consequently make frequent use of honey. It is also good for colds, coughs, hoarseness, quinsy, pulmonary affections, catarrh and asthma. A little goose-grease mixed with it adds to its curative properties.

Another Triumph.—Our readers will be pleased to learn that through the united efforts of Prof. A. J. Cook, Hon. Edwin Willits, and the Manager of the National Bee-Keepers' Union, the serious difficulty mentioned last week has been overcome, in reference to transmitting attending bees with queens through the United States mails.

On the first of July we received the following letter from the General Superintendent of the Railway Mail Service :

> *To Thomas G. Newman, General Manager of the National Bee-Keepers' Union :*
>
> SIR—Yours of June 25th regarding the admission of queen-bees to the mails is at hand. I am happy to inform you that the regulation will, in the next monthly Postal Guide, be modified so as to read "queen-bees with necessary attendants." This, I think, will obviate the difficulty. The matter has been brought to the attention of this office by the postmaster at Griffin, Ga., and he has been advised of this modification.
>
> JNO. JAMESON, *Gen. Supt.*

A similar letter was sent to the Hon. Edwin Willits, and in reference to forwarding queens to Canada, Mr. Jameson replies as follows :

> HON. EDWIN WILLITS :
>
> SIR—In regard to forwarding queen-bees to Canada, this office, of course, has nothing to do. I see no objection to the postmaster at the mailing office receiving them for such dispatch, and if the Canadian authorities see fit to receive them, this office certainly has no objection. This question has been referred to the Superintendent of Foreign Mails. JNO. JAMESON, *Gen. Supt.*

Prof. Cook sent us the above letter on July 1, 1886, and then added :

> DEAR MR. EDITOR—We are triumphant again, you see ! I think this very satisfactory. Yours truly, A. J. COOK.

Again we score a victory for the National Bee-Keepers' Union ! and exhibit another benefit secured to bee-keepers generally by its effort ! No individual bee-keeper could have accomplished what has just been done by the Vice-President, and the Gen. Manager of the Union, assisted by Pres. Willits, the personal friend of Vice-President Cook.

And yet there are some who inquire—"What good will the Union do me ?" Others aver that the Union is of no benefit to them, and selfishly refuse to become members. In the face of the showing for last year's work, which we gave—and the accomplishments of the present, we are ashamed to state that only 4 new members have joined the Union during the past month.

Those who supinely fold their arms and selfishly refuse to aid a Society created solely for their benefit—are—are—(we were about to use some strong adjectives—but upon second thought we will add that they are), to say the least, standing in their own light, and unworthy of the name of progressive and patriotic apiarists. There ought to be a thousand new members where there has been one. Now what shall be the result during July ? Let us see.

We have not yet received a reply to our letter to the Superintendent of Foreign Mails. We will publish it as soon as it is received. From the foregoing note to President Willits, we see no reason why queen-bees cannot be forwarded to the Canadian lines, and if they are received by the Canadian postal authorities, there will be no trouble—but we await results.

To Prevent Robbing.—Mr. J. Halter, in the *Bienen Zeitung*, gives his method. By the use of glass over the entrance he deceives the robbers. He says :

> After trying the usual methods to stop it, when, owing to extracting, robbing had been going on rather extensively, and these remedies failed, he succeeded in putting an end to it in a very simple manner. He placed a piece of window-glass, about 8x5 inches, in front of the flight hole, the top resting against the hive, and the lower end about 1¼ inches from the entrance, so as to enable the bees of the hive to go in and out at the sides. The next morning the robbers made an attack on the hive in great numbers, but going straight at the entrance were stopped by the glass. They swarmed in front of the glass, but could not find the entrance at the sides, and very soon returned in disgust. To effectually put a stop to further robbing the glass should be allowed to remain for several days, until the robbers forget the spot.

◆

The Caledonian Apiarian Society will have a Bee and Honey Show at Dumfries, Scotland, on July 27-30, 1886. Prizes are offered on bees, hives, comb foundation, honey, honey drinks, honey cake, honey plants, etc., under the able management of Mr. Robert J. Bennett, 50 Gordon Street, Glasgow, Scotland, who has for years been the honorary secretary. It will doubtless be, as usual, a grand success. We remember with pleasure the exhibition of this Society in 1879, when we were there, and made many friends.

◆

Mr. J. N. Arnold, of Richmond, Iowa, has written to Hon. A. J. Baker, Attorney General of Iowa, for his opinion as to whether bees are taxable in that State, and here is his reply :

> I am not permitted to give you an official opinion any more than a judge of a court would be to give an individual an opinion on a matter that might come officially before him for adjudication.
>
> Look in Sec. 1, Acts. of 15 General Assembly ; see McClains Code, 1st Vol., page 189 and 190, and at subdivision 4, and you will see what private property is exempt from taxation. Bees are *not* included in it. The question is, are they property ? I guess if some man were to steal yours, you would insist they were. Yours truly,
>
> A. J. BAKER.

◆

Congress and Adulteration.—The *Anti-Adulteration Journal* makes the following very sensible remarks on this subject, and we fully endorse them :

> There is no use of so much difference of opinion in Congress, as to the kind of legislation needed. There is but one just demand and that is the passing of an act that will fix a standard for all pure productions, and the enforcement of all producers stamping such articles with a stamp supplied by the government.
>
> The impure articles should only be allowed sale, if wholesome ; injurious preparations should not be allowed sale under any circumstances for food. All stamps should be supplied at merely cost of printing.
>
> The way to suppress an injurious food is not by high tax stamp, but by actual prohibition of sale. To prevent fraud, simply provide inspectors to supervise production and sale, and arrest and punish all false stamping of foods.
>
> There is certainly nothing in the Constitution denying the general government the right to pass such law. The States can pass whatever local law is necessary, and Congress can pass such general law as is necessary. On so vital a question there can be no conflict.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Management for the Most Increase.

Query, No. 274.—I wish to work all my bees for all the increase possible this summer, and not interfere with my honey crop any more than can be helped. I have built up as many 3-frame nuclei as I have heavy colonies, which now have young queens about ten days old. If by giving the parent colonies one of these queens immediately after they swarm, would it keep back after-swarms, and get the larger crop of honey by so doing? By building up my nuclei again I would get two swarms from one colony.—A.

For this locality your plan would work well, provided you was careful and cut out all queen-cells.—H. D. CUTTING.

You cannot expect much clover honey from a colony that has swarmed. The giving of queens to the strong colonies might help them for the fall crop, however.—DADANT & SON.

I think that it would be as well to let colonies take their usual course, and build up nuclei into strong colonies as rapidly as possible without reducing colonies.—A. J. COOK.

Much depends upon the locality as to management for honey. In my locality it would be bad policy to make nuclei as early as you have done. I should *guess* that in some cases giving a young queen to the parent colony would prevent after-swarms; in others not; but I have had no experience.—C. C. MILLER.

Not where I live. Build up the nuclei to full colonies, and allow but one natural swarm from each full colony, hiving the swarm on the stand of the old colony; move the old colony to a new stand, and let them rear their own queen. This is applicable to this locality.—G. M. DOOLITTLE.

In a good honey-flow like the present, the bees will not allow a queen, either fertile or unfertile, to destroy cells, whether sealed or unsealed. But if the new colony be placed upon the old stand, the queen given to the old colony may be allowed to tear down the cells, and she will certainly do it if a large part of the bees be shaken down in front of the new hive on the fifth or sixth day after swarming. In this case the queen may be given at any time. With a contracted brood-chamber and the use of perforated zinc this latter procedure is one of the very best in working for comb honey. —G. L. TINKER.

I should never give a parent colony a queen immediately after casting a swarm. The colony needs the short absence of a queen. The hive is full of brood when the colony swarms. It would not prevent after-swarming, as a rule, unless all queen-cells were destroyed. You can successfully build up the nuclei.—JAMES HEDDON.

It would, in this locality, usually prevent after-swarming, but would not be the means of securing any larger crop of honey, than would the practice of what is called the "Heddon method;" while it deprives the nuclei of their queens at a time when they can illy afford to spare them.—W. Z. HUTCHINSON.

It is difficult in any given case to advise. In my own locality I should give all the room that could be used, and return all swarms that issue; leaving the matter of increase of bees till the honey season was over. Other localities may demand different methods. Test the matter in the light of precedents given in the BEE JOURNAL during the last four or five years. —J. E. POND, JR.

Queen Laying Many Eggs in a Cell.

Query, No. 275.—A weak colony lost its queen in March. They reared a very nice, large queen which commenced laying late in April, from 1 to 6 eggs in a single cell. Bees covered only two frames. What is the cause, and what is the remedy? Will this queen become all right as she gets older, and the colony becomes strong in bees?—J. R.

If not a drone-layer, she probably will.—G. M. DOOLITTLE.

The queen is probably unfecundated and should be superseded by a good queen.—G. L. TINKER.

Very likely when there are bees enough, you will find that you have an excellent queen.—C. C. MILLER.

There were probably too few bees to care for all the eggs she laid, and the best she could do was to put several in a cell. She will probably be all right as the colony becomes stronger.—W. Z. HUTCHINSON.

I guess that she laid thus irregularly because she did not have room within the limits of the warmth of the bees to engage her time. In such a case I never "jump at a conclusion." When the bees begin to seal the brood is time enough to judge of the worth of a young queen under such circumstances.—G. W. DEMAREE.

Your queen is all right, provided she became fecundated that early in the season. If you had given them one or two frames of hatching brood at that time it would have been a great help to the colony and queen.—H. D. CUTTING.

Probably this queen was reared at a time when no drones were flying, and did not become fecundated. The remedy is to give the colony a fecundated queen at once, as the one mentioned will probably never become fecundated.—J. E. POND, JR.

That queen has more eggs than she had room for. She is a *good queen*. A queen will never lay outside of the cluster in cool weather.—DADANT & SON.

She may be a drone-layer, or may be she is all right, and behaves as she does because of the small size of the colony. I would give brood from other strong colonies and watch the effect.—A. J. COOK.

Usually the cause is a lack of bees to keep a prolific queen's eggs warm, if laid in as many cells as eggs. If this is your case, the queen is all right—a good one.—JAMES HEDDON.

Re-Waxing Honey-Barrels.

Query, No. 276.—Would you wash out and re-wax extracted honey barrels before re-filling with this year's crop?—G. D.

I do not think that I should, if they have been kept clean, and are sweet. —A. J. COOK.

Not if tight, sweet, and clean, and the same kind of honey is to be put in them.—G. M. DOOLITTLE.

I would wash them out, but not wax them. I would not use a barrel that *needed* waxing.—W. Z. HUTCHINSON.

I should, most certainly. It will be necessary to dry the insides thoroughly before re-waxing. — J. E. POND, JR.

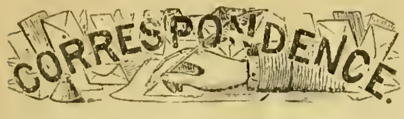
Give your barrels a good washing, put a light in at the bung and examine; if you find them well coated, all is well.—H. D. CUTTING.

No, if they are all right and did not leak. We never wash them, but bung them up tight when empty.—DADANT & SON.

I would wash them out, if needed, but I would never wax barrels for honey. It costs too much. If they will not hold honey without waxing, "wax" your cooper.—JAMES HEDDON.

I would scald and wash out any vessel that had been previously used for honey, but I would buy good barrels that do not need waxing. It is expensive to wax barrels; besides, a barrel that will not hold without waxing, is not entirely safe when waxed.—G. W. DEMAREE.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.



Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest: O⌐ southeast; and ♀ southwest of the center of tho State mentioned.

For the American Bee Journal.

Fenced Bee-Yards, Making Reports, etc.

W. H. STEWART.

On page 720 of the BEE JOURNAL for 1885, Mr. Tiffany asks Mr. L. C. Root to describe a tight enclosure for a bee-yard. In reply Mr. Root said: "I would say that the fence around my yard is 8 feet high, and close to the rear of hives. If the fence is in front of the hives it should be several feet from the front row. If the location is in a very bleak place, I would have it higher. It should be made of matched boards, or battened to make it tight."

My opinion is, that such a fence would at times be of advantage to the bees, and at other times a great disadvantage, and, all things considered, it would be much better than if no fence of any kind were within 50 feet of the hives. If a tight, 8-foot fence was placed on the north and west sides of the bee-yard, and the hives stood within 12 feet of the west fence, and they were to remain on the summer stands through the winter, in this climate, then the snow would drift over the fence, and bury the hives nearly or quite 8 feet deep under the drift, which would be equal to, if not better, than an ordinary cellar for the bees; but in early spring, when cold, raw winds were blowing from the northwest, and at the same time the sun was shining brightly in the forepart of the day, the warm sun would be reflected down on the hives by this tight "fence," and the cold wind entirely broken off, it would be many degrees warmer at and near the hive than 10 or more rods away in either direction; this would be the case also with bees that had been wintered in the cellar, after they were put out in the spring.

This state of things would deceive the bees; they would think that the weather (or temperature) was the same throughout their flying distance, as it was in their cozy shelter; thus they would venture out when it was barely warm enough at the hive to fly safely; and as they would fly out they would be caught by the cold blast, and in a moment be chilled and fall to the ground to rise no more. Thus a good colony could be depleted 50 per cent. in one day; and, be it remembered, that in such case it is the best colonies that thus stir out first, and the most, and also the most healthy and energetic bees of any colony that work earliest and latest; and the bees that would thus be lost are the ones that we can least afford to lose.

Again, in a hot July day, when basswood is in bloom, and we want all surroundings arranged to the best possible advantage in order that the bees may do the greatest possible amount of labor, this tight fence would shut off the refreshing western breeze (that is of great advantage to bees as well as men), and instead of storing and sealing honey, many of them would be compelled to lay idle on the outside of the hive.

Mr. R. says of such a fence, "if in front of the hives, it should be several feet from the front row." The reason for this is, no doubt, that the bees would not be compelled to rise so directly upward to scale the fence; but the truth is that bees do not always start out for stores in the same direction that the hive fronts. It makes not a particle of difference with the bees which way the hive fronts after they are well out of it, on starting out for work.

My bee-yard slopes to the south and east, and the hives front in the same direction; the basswood is northwest, and as the bees leave the hive they start immediately northwest; thus if I had such a fence at the rear of the hives, it would hinder them more than if it were in front.

Furthermore, if bees are wintered on the summer stands, and are near this fence on the south side, the snow would not, in this locality, form a drift to cover the hives, and the reflected sun, as above mentioned, would lure the bees out in bright, winter days, when the cold at a few feet distance from the hives would chill them. It is true that during severe cold and windy weather in winter, the hive would be protected from the wind; but bees in a good hive do not feel the winter wind, and the degrees of temperature are the same, wind or no wind.

True, this fence would be a barrier to thieves, but a barb-wire thickly woven would be cheaper, more desirable, and out of the way of the bees.

HOW TO MAKE REPORTS.

Away back in the BEE JOURNAL for 1883, page 287, I gave my idea of the proper and improper manner of making out annual reports by bee-keepers. When I wrote that article I felt quite confident that the fraternity would try to profit by the hints thrown out. I have read the BEE JOURNAL closely ever since, and have been able to find nothing on that subject.

For many years previous to the writing of that article, bee-keepers generally had suffered heavy winter losses, and I foresaw then what I now see is a matter of fact, namely, that from the loose and indefinite manner in which all were reporting their methods of management, the wintering problem would never be solved. Losses of the following winter were greater and more general than during any other winter for 43 years that I had been wintering bees. This is slow progress indeed!

In my article I stated that "to us it seems impossible to get a full and correct statement of our condition, products and prospects in any other way than to get a full and correct report from each individual engaged in the business....To be useful, a report should embrace an experience for at least one whole year; not only so, but that year should begin and end at such dates that we could learn from it what effect such and such management through the spring, summer and fall had on the bees during the winter; and the manner they were wintered."

I am now well satisfied that if the plan of making out reports that I there gave, had been carefully carried out, we could, from the reports that would have been given the following spring, have learned very nearly, or perhaps exactly, what was the prime cause of the great loss; but now the truth is that bee-keepers as a mass are literally confused on that subject.

Last spring the oldest and most experienced were as much in the muddle as the novice; and since that time more brain power has been expended in the attempt to solve the problem than on all other matters concerning apiculture. My opinion is, that the fate of the bees was fixed before they went into winter quarters.

It will be remembered that in the fall of 1884 many bee-keepers in different localities reported that the fall crop of honey was short, and in many localities an entire failure. Where such is the case it is well understood that breeding was discontinued early, and in such a case very few, except old bees, go into winter quarters; and in late winter and early spring the mortality must be rapid and unavoidable.

Now, if we could know by such reports as I have suggested, where the fall crop was a failure, and where a partial failure, and who was wise enough to feed all through that scarcity of honey, in order to keep up breeding; and in each case whether the mortality was greatest where breeding in the fall was least, then we would be able to decide whether one theory (*i. e.*, all old bees) was the cause of the loss or not. Many now believe with me, that that was the cause, but cannot prove it, from the fact that we have not the reports.

Some have said that they believed that old bees were as good as young ones to go safely through the winter and spring. If I should write such things, I would expect others to accuse me of having a desire to ruin all except myself.

WINTERING—HIBERNATION.

On page 5 is quite an interesting article from Dr. G. L. Tinker. Mr. T. makes some good points, and I wish to thank him for giving us a detailed account of his careful experiments and observations; but I cannot quite agree with him in all of his conclusions. He says: "I am now able to say that if we ever expect to winter bees scientifically—perfectly—we *must* provide them with conditions and surroundings that they may hibernate." (Italics are mine.) In another paragraph he says: "My belief is that we shall not be able to winter bees perfectly until we shall master the problem of hibernation—until we shall secure to them that perfect rest, etc." It seems to me that "perfect rest" would be absolute death.

Again he says: "What hibernation is, and how it can be secured, will appear from the following." He then gives a detailed account of his experiments and observations, which being summed up amounts to about this: If bees can be placed in a cellar where the temperature is and continues at 41°, they will "hibernate" and enjoy "that perfect rest," and winter "scientifically and perfectly."

The following are some of my reasons for thinking that the Doctor has not as yet discovered the plan of wintering bees that will give perfect and certain success:

When I built my bee-cellar in a sandy hill, it was made deep enough to have all the bees below the natural surface of the earth. It was then covered first with oak poles; then 2 feet of dry straw; next 2 feet of sand; then I foot of straw, and finished with 2 feet more of sand. When the bees were in this cellar the temperature was invariably 45° for the three first winters, one of which was extremely cold, and another very mild and open; the third about an average. Through these three winters I had from 80 to 180 colonies in this cellar, and not a single one was lost, except 2 that starved. Then came the winter of 1884-85, and by this time the straw in the roof had decayed, and the naked sand came down on the poles. The weather became very cold soon after the bees were placed in the cellar, and the covering of sand froze solid all the way through. The cold, frozen under-surface of this sand roof so reduced the temperature that the mercury stood at 41° without change until March. (I have a thermometer hanging on a string that I can draw up through a small pipe ventilator in the roof at all times. I watch this closely.)

When the bees were put in, in November, they were warm enough to make lively movements, and if Mr. Tinker is correct in his conclusions, then those 200 colonies should have hibernated in a few hours, and have remained in "that perfect state of rest," and should have wintered "scientifically—perfectly," till breeding, at least. But the fact is that out of the 200 colonies only 50 came through alive, and all were poor, puny, weak things—hardly worth the trouble and care to "pull them through."

The three preceding seasons had given our bees a good flow of fall honey, and breeding had continued late, which gave a plenty of young bees for winter and spring; and in addition to successful wintering there was no "spring dwindling."

In the fall of 1884 our bees got no fall honey, and breeding was discontinued early, and bee-death came early also. There is nothing like young bees for wintering and for the spring.

It is my opinion, that in the nature of things, all attempts to keep a bee-cellar at a temperature of 41° through the winter will be a failure; thus, if Dr. Tinker's theory should be true, it is not practical; and if not practical, and if, as he concludes, we will never be able to "winter bees scientifically—perfectly," until we are able to "provide them with conditions and surroundings"—41°—that they may hibernate from the beginning of winter to the time to begin breeding, then it follows that we must give up in despair and never expect to winter our bees successfully.

Orion, ♀ Wis.

For the American Bee Journal.

Bee-Keeping for Women, etc.

MRS. MAHALA B. CHADDOCK.

Bee-keeping is too hard work for women—I have said it before, and I say it again. When I say women, I mean, of course, American women. German and Swede women can keep bees—they can do anything that requires lifting; American women cannot. All American women have a tendency to heart disease, consumption, or kidney disease, and carrying bee-hives and boxes of honey is not good for any of these diseases.

Mrs. L. Harrison employs Irishmen to do her lifting; Mrs. St. Julienne Moore, of Louisana, has colored women to help her; the Linswik sisters hoist the hives around some how and get along. I am always watching and waiting to get some man to help me carry hives and honey. I have no Irishmen and no colored women, and the men are always busy. I want the old colonies carried away just when the bees are working most briskly, and that is just the time that the men are away off in the fields.

Yesterday evening I wanted some honey taken off, but there was the hay to get in, and everybody was just as busy as they could be. I took off the forty-pound boxes, and as I could not carry them to the house, I rolled them (if that is the proper thing to say of a square box) all the way to the house, lifted them in, and let the bees go out. I always put my honey-boxes on the floor close to the screen-door in the dining-room, and as fast as the bees gather in bunches on the screen, I brush them out with a whisk broom. Once last year I took off several boxes of honey at one time, and as the day was cool the bees became chilled after leaving the honey-boxes, and fell down inside the screen-door, looking just like dead bees. I gathered up a gallon and put them in the cages that the bees were shipped in, and laid them on the chimney over the kitchen stove; in two hours they all revived, when I gave them to a colony.

I have been hiving my bees in empty hives, *a la* Hutchinson, all but the one comb of brood that I put in the centre, and I am getting a splendid lot of drone-comb. They seem to build drone-comb for about four days, after that they settle down to building worker comb. I take out all sheets of drone-comb and hang them in the upper story of a Simplicity hive, and let them fill it full of honey. I have three of these completely full now. This honey I will sell or use at home, as it is not in shape to sell, and I have no extractor.

Bees are working on red clover now; the honey is better than the white clover honey, to my taste. Is it a fact that flowers do not secrete nectar when the nights are cool? I notice that Mrs. L. Harrison gives that as a reason for the nectar not coming in. Now, I am very loth to dispute anything that a noted bee-keeper says, but *it is a fact* that we have had hot days and cool nights ever since the white clover bloomed, and my bees have gathered and are gathering honey right along. Perhaps the wetness or dryness of the atmosphere has something to do with it. If it is cool and wet the chemicals do not work right, but if cool and dry they do. We have had dry weather—only one good rain in six weeks.

Vermont, ⊸ Ills.

For the American Bee Journal.

Horses and Bee-Stings.

WM. MUTH-RASMUSSEN.

The following article from the San Francisco *Chronicle* of June 17, will, no doubt, be of interest to readers of the AMERICAN BEE JOURNAL:

It is a very common occurrence to hear of horses being stung to death by bees. All bee-keepers know that the little insects have a peculiar aversion to the odor of the stable, and for this reason they are obliged to exercise great care in going near the hive after handling a horse, as they are almost sure to be badly stung should there be any of the odor of the horse observable. Horses going near the hives, especially if in a state of perspiration, are particularly susceptible to attack, and the result is almost invariably death. A correspondent of the San Diego *Union* offers a valuable suggestion, founded upon his own experience, on this point. A swarm of bees attacked a valuable horse and stung him in a terrible manner, so that the animal rolled upon the ground in his agony. A smudge was made with damp straw, and the bees thus driven away from the horse. Then the animal was given a good dose of laudanum—several tea-spoonfuls altogether—and in this manner the pain was considerably relieved. He soon recovered sufficiently to be taken to the stable, and was then thoroughly sponged with a strong solution of common baking soda and water. This was repeated, and the result was the animal entirely recovered, whereas if this treatment had not been adopted he would unquestionably have died. While the soda is an excellent remedy, perhaps a better thing to have used would be a solution of ammonia. It is well known that a little of this will quickly relieve the pain when a person is stung, and it would doubtless act much quicker on the horse than would the soda solution. However, either is good, but the application of laudanum to quiet the suffering animal seems to be a novelty in veterinary practice.

Cayuga Advocate.

Haldimand Bee-Keepers' Convention.

The Haldimand Bee-Keepers' Association met at Hagersville on Saturday, June 5, pursuant to adjournment. The minutes of the last meeting were read and approved.

The President expressed himself in favor of natural swarming; if increase was desired, dividing was the most rapid plan, providing queens were given to the new colonies.

Mr. Armstrong said that if increase was desired, artificial swarming was the way to do it, but it was necessary to rear good queens for the new hives, or buy them; he preferred artificial swarming, as it could be done when convenient, and obviated the necessity of watching the hives to prevent swarms from absconding. A good plan, if you want honey, is to allow one natural swarm, and prevent after-swarms by cutting out queen-cells.

Mr. Atkinson and Mr. Rose gave their plans, and approved of what had been said by the previous speakers.

The President gave his plan of dividing, which was slightly different from that usually adopted.

Mr. Armstrong took three or four frames of brood and adhering bees, out of a strong colony, and put them into a new hive, and gave them a laying queen, and they soon became a good colony.

Mr. Smith thought natural swarming the best unless a laying queen was given to the new colony.

The President said that the best queens were reared in the natural way by the bees themselves; he had reared them both ways, and preferred the natural way, but a queen-nursery is very valuable.

Mr. Ross thought the best way was to rear queens only from the best and purest colony.

Mr. Atkinson spoke in favor of rearing queens in a two or three frame nucleus.

Mr. Armstrong described his plan of rearing queens, which is the same as that practiced by D. A. Jones, and exhibited a queen-nursery.

Mr. Jeffrey thought as good queens could be reared by the bee-keeper, as were reared under the swarming impulse.

In answer to Mr. Rose, how to winter bees, the President advocated plenty of feed, a good, strong colony, and protection from the cold weather. Mr. Armstrong believed in plenty of protection from the cold, plenty of stores and good ventilation.

A general discussion took place on hiving swarms, and Mr. Armstrong exhibited a swarming-box he used for the purpose—a very handy and useful implement.

The statistics of those present were: 461 colonies in the fall; 330 in the spring.

Moved by Mr. Smith, seconded by Mr. Anguish, that the next meeting be held at Caledonia, on Monday, Aug. 23, at 11 a.m.

E. C. CAMPBELL, *Sec.*

Read at the National Convention.

The Influence of Honey on Wintering.

CH. DADANT.

Nobody will question the influence of the food on health. Plants cannot thrive in a soil unsuited to them; man, as well as every kind of animal, needs a food easily digested and able to sustain life; bees are not an exception to this rule. Nay, more than man, more than most of the animals, they sometimes eat some kinds of food which, according to circumstances, can sustain their life or cause their death.

You have 2 colonies of bees entirely destitute of honey; you give one of these colonies for food a comb of good and well ripened clover honey; you give the other colony some molasses. Both colonies will seem to thrive equally well, if you make the experiment in summer, when they can enjoy a daily flight. But if you shut up both hives for two days, when you release them the bees of the one with clover honey will go out to void their intestines without you being able to see their feces. These will be so small, so light in color, that they will fall unnoticed, as in the every day purifying flight of a healthy colony. On the contrary, the bees of the colony fed with molasses will let large drops of dark and foul matter soil all the neighboring objects.

If, in lieu of the two days' confinement you prolong it for eight days, then, at the opening of both entrances, the bees of the colony with clover honey will act the same as after their two days' confinement, while the bees of the colony fed with molasses will crawl out, discharging their feces around the entrance; some, if not the greater part of them, will have their abdomens so much distended that they will be unable even to void their contents. These poor bees will crawl everywhere around their hive, and perish on the ground.

I can give another illustration of the influence of honey on bees during a close confinement: For years the importation of Italian queens into this country was attended with much loss; sometimes half of a shipment were alive. Such a result was then considered as a lucky one, for most of the time hardly one queen was received alive, to show that the bees were not all dead when put in the boxes.

Of course such a business was far from being profitable, and more than one enterprising bee-keeper was deterred from continuing it, after a few trials.

What was the cause of such ill success? The main, if not at times the only cause, was the quality of the honey given to the bees for food during the journey.

In Italy bees gather largely from a diversity of plants. Persuaded that success in that branch of business was possible, I began, with my shipper, a series of experiments to ascertain which kind of honey was the best for such a long confinement. After several careful experiments during two years, we succeeded so well in the selection of honey that we have many times received boxes containing queens which had barely a dead worker-bee after a journey of 22 days. Then our importing business became a success, and paid back all the money lost in seven years of unsuccessful importation, giving handsome profits besides.

Both these illustrations show what happened during the winter to the bees, according to the quality of the food that they have to eat.

Every bee-keeper has noticed that when, after winter, we find some of our colonies dead, if they have not starved or smothered they have perished with diarrhea, and that this same malady, if we can call it malady, has also made sad havoc in the population of some of our colonies, while some others have passed through the winter safely. I have even noticed that in such a diversity of fate, a few colonies were so free of diarrhea that I was unable to see a drop of foul matter around their hives.

Now let us see what had produced such a difference in the condition of these colonies. The indispensable food for bees is sugar, and chemistry shows that the most easily and most thoroughly digested form of sugar is cane sugar. Honey contains sugar in two different forms—cane and grape sugar. Some plants give honey with more cane, others with more grape sugar, consequently a honey containing the most of cane sugar, such as clover honey, will prove more nourishing than fall honey, which contains more grape sugar, and leave besides in the intestines of the bees a smaller quantity of undigested residues. Our bees in winter are confined for weeks, even for months, and it is easy to understand how the colonies with good honey, having less residues in their intestines, were able to remain in good health; while the colonies which had a poor quality of honey to eat, perished more or less rapidly, according to the quality of this honey—the bees with juice of fruits or honey-dew being ahead.

When the honey is stored in cells partly filled with pollen the bees eat some of this pollen and their intestines are readily filled up. The same result follows when the honey is not sealed, for, not only is it watery, but the quantity of water that it contains is increased by the property that it possesses to absorb moisture. This water accumulates in the intestines of the bees, and if they are prevented by cold from voiding it, they become uneasy and perish.

Now that we understand this, one of the causes of sickness in bees during winter, let us remember:

1. Not to remove in summer all the spring honey that the bees have stored, leaving in the hives a sufficient reserve for the coldest part of winter.

2. To remove all the combs containing honey stored in cells partly filled with pollen. These combs are easily found on account of their opacity. They are splendid for bees in the spring, for this mixture will incite breeding.

3. To remove all the unsealed honey that the bees will be unable to consume before winter.

4. To remove also the honey-dew, when there is any.

5. To prevent bees going to the cider presses, or to remove the cider stored in the hive. This liquid always remains unsealed.

6. To replace with good sealed honey, or with good thick syrup all the honey taken out, so as to give to the bees sufficient provisions. The best syrup is made with one pound and one-half ounce of water for two pounds of granulated sugar.

Of course such precautions are not indispensable every winter; for a bad food can keep bees alive if they have frequent flights. Besides, as it is very difficult to follow my advice to the letter, I have been accustomed to awake my colonies in winter every day when I foresee that the thermometer will reach 45° in the shade. This precaution is especially necessary with chaff hives, for the sun cannot easily warm them inside. The bees, thus awakened, enjoy a good flight, and return with empty bowels, ready for another confinement.

Hamilton,⊙ Ills.

Prairie Farmer.

Storing Honey—Extracting, etc.

MRS. L. HARRISON.

The best place to store honey when removed from hives, is in hot, well ventilated rooms. Some cellars may do, but I have none in which the honey will not in time get thin, break the capping and run from the boxes; and extracted honey grows thin and bubbling. One year, while experimenting to find a suitable place for storage, some was put in an airy chamber, some in the cellar, and a portion put on the top of a cupboard in the kitchen, where a coal fire was kept, and the thermometer at times in the porch adjoining indicated 100° in the shade. In the latter place, the honey kept perfectly, and in the others grew watery, oozing from the combs.

I have eaten honey gathered in the canyons of California from the celebrated white sage, from orange groves, and cacti, but not equalling in flavor our white clover. Some seasons Texas boasts of her tons upon tons of horse-mint honey, and Florida a never failing supply from palms and mangroves, and yet not equalling the famed clover of the North. During a good flow of clover honey, when comb is built rapidly, it is so delicate and tender as to be almost imperceptible, and of snowy whiteness. As this honey is so fine, every effort should be made to secure as much of it as possible, and in the best shape, unmixed with other honeys. As fast as the comb is sealed, it should be removed, so that its delicate whiteness may not be impaired by the bees.

Where extracted honey is the product sought, the bees should be provided with clean, white comb, and not extracted until well ripened and sealed. White clover honey, unmixed with any other, is the most delicious and healthful sweet known, and every care should be exercised to keep it intact. The uncapping knives should be clean, not stuck up with other honey, and also the extractor, and the utensils into which it is drawn. Jars are very good receptacles for holding it, and should be covered with muslin tied down closely to prevent the ingress of insects, and give it an opportunity to ripen by evaporation. If the jars are piled one upon another they should have cross sticks, not close boards to prevent the air circulating freely. Some producers say there is no need of straining the honey as it runs from the extractor, as all debris will rise to the top, and can be easily skimmed off. I prefer straining through cheese cloth, and when the jars are piled away, feel certain they contain nothing but pure honey—no comb nor bees.

Peoria,⊙ Ills.

For the American Bee Journal.

Importance of "Our Union."

J. E. POND, JR.

I have read with real pleasure our Manager's report of the workings of the "Union" during the last year, and heartily concur in all that Mr. Clarke says in regard to it and Mr. Newman. I am, I must confess, however, somewhat surprised that so few of our vast army of bee-keepers have enrolled themselves under its banner. The "Union" is a means of defense; and while perhaps the many may never need its aid and assistance, no one can tell where or when a blow may be struck by our enemy.

To-day there are virtually no precedents of law, but I fear that an attempt is being made to create such. Suits will, I fear, be brought in localities where no defense will be made, and judgments given on default or for want of proper defense, that will come up in the future to work us harm.

Our aims and objects are well known, and our weakness in point of numbers is equally as well known, and the very fact that of the many bee keepers in the country, so few are members of the Union, is *prima facie* evidence that we do not take that interest in the matter that we ought, and that we may not be able to make a vigorous fight.

The moral effect of numerical strength is great, and many battles have been won by sheer force of numbers, and without striking a blow. So with us; if we can show an unbroken front, composed of a majority of the bee-keepers of the country, and cause it to be understood that each and every one of us are pledged to pull together in unison and harmony for defense of our rights, we shall bear down all opposition by this moral weight alone.

We must at all events fight every suit brought, and carry the battle if needs be to the decision of the highest courts of the land, and thus prevent the establishment if possible of any dangerous precedents. Two or three cases won against us will tend to make a law that it will be hard in the hereafter to overcome; but if we can prevent such a state of things, and by so doing show the enemy that we fight each for the other, and that the enemy of one is the enemy of all, it will cause our jealous neighbor to pause and consider the chances before he begins a suit against us.

A fight against 300 or 400 is a far different thing from one against that many thousands, and while the one might prove an easy conquest, the other would prove a disastrous defeat.

Rouse yourselves, brother bee-keepers! send in your names and of your substance, and thus make our "Union" a sure defense.

Foxboro,⊙ Mass.

Eureka Springs Daily Times.

Eureka Springs, Ark., Convention.

On June 19, 1886, the bee-keepers of Eureka Springs, to the number of over thirty, met at Eureka Springs, for the purpose of organizing a bee-keepers' association.

After several addresses on the subject of bee-keeping, a constitution and by-laws were adopted, and the following officers elected for the following year: President, W. F. Bragg; Vice-President, J. W. Hart; Secretary, Dr. S. S. Purcell; and Treasurer, T. F. Hawley.

The object of the association is to promote good-will among the members of the association; to exchange ideas on bee-keeping; to discuss the merits of the different kinds of flowering plants and shrubs as regards bee-pasturage, and the different kinds of hives and the manner of keeping bees through the winter.

The association adjourned to meet in August next at the call of the President. In the meantime all interested in bee-keeping not present are requested to correspond with the Secretary, by mail or otherwise, so that they may receive notice of the next meeting. All parties interested are cordially invited to be present, join the association and take part in the work.

Country Gentleman.

Bee-Keeping and Gardening, etc.

GEO. A. STOCKWELL.

Bee-keeping has made great strides within a few years. Formerly it was not thought of, except as connected with agriculture. Apiculture and agriculture go hand-in-hand to-day, but the one has proved so remunerative that it has become a separate industry, carried forward successfully, independent, and without the aid of agriculture.

In this country to-day are more than 3,000,000 colonies of bees in apiaries, each having from a half-dozen to 1,000 or 1,500 hives. In the large apiaries extensive and costly machinery is employed to minister to the wants of the bees. If a thousand colonies be on hand at the opening of spring, a thousand new hives will be required in the swarming season. If every colony does not swarm, some may swarm twice, and a thousand hives would not be too many to provide for the season's work. In each hive will be required ten frames—10,000 in all; also two division-boards for each hive, or 2,000; 5,000 separators, and 100,000 sections, and many other lesser instruments and aids. All these appliances are made by machinery constructed for the purpose, and apiarists whose sole industry is bee-keeping, are provided with the means of supplying themselves at first cost with all implements needed.

An apiary of 500 or 1,000 colonies is not unusual, especially in California, the land of honey, if not milk and honey, and the outlook gives the future a more promising aspect than the past had. The only check to the California honey yield will be the protest of the wine-growers, who claim that the bees rob the grapes. Bees cannot injure whole fruit, as they have no power of penetrating the outer covering, but they will attack unsound fruit.

Although there are 3,000,000 colonies of bees in the United States, and there may be 6,000,000, more or less, before the close of another year, yet to the great body of the people honey is a luxury, not because it is high in price, but because it is unknown; that is to say, not known and accepted as other articles of food are. In a town of 1,200 inhabitants, a storekeeper sold less than 12 pounds of honey between fall and spring. This was due wholly to the fact that the people were unacquainted with honey, and it was proved by this fact. Later an inhabitant of this town became interested in bees, and sold in the town nearly 200 pounds of honey the first year after his apiary was started. Of course personal solicitation and push started the sale, and then the people "having a taste," wanted more, and a trade was established.

Last fall there was reported an over-supply of honey. There has never been more pure honey offered than could be sold, if means were employed to sell it, but there has been in cities an over-supply of something called honey.

In New England there are a few apiaries maintained independent of some other calling, but the interest in apiculture has increased wonderfully within the last few years. Bees have been introduced, one hive, two hives at a time, on many New England farms. This was done ostensibly "to please the boys," to keep them at home. It succeeded, and not only pleased the boys, but the old folks, too.

It is related that a farmer, outside of New England, became so much interested in apiculture, that he devoted the whole farm to bee-pasturage, and gave his whole attention to bees. But few farmers will do that, yet they are willing to give apiculture a trial in connection with some other branch of agriculture. Bee-keeping is particularly adapted to helping the small farmer, or gardener. Such workers condense labor into a small space, and can have an eye to any and every part at all times.

On a small farm, bee-keeping, if honey be the object, will be profitable and satisfactory. The outlay in labor will be very little. By this is not meant that bees will take care of themselves, although they will do so very nearly; at least they will take themselves off, often without any help. The gardener wishes to economize space and time, and buys say 5 colonies of bees, and places them on the south side of some wall or fence, where, as he works, he can see them and attend to them in a moment, if any service be needed.

The space required need be only the width of a hive, and 15 feet in length, and a number of such places may be found on any farm, that cannot be utilized in any other way. A southern exposure is best, but bees may be placed anywhere, high or low, on the top of the house, over a porch, on a broad-shelf attached to the side of the barn, in the attic of the house, in the loft in the corn barn, in any place whatsoever. They may do better in some places than in others, but it is sufficiently well established that the place of the hive is of little importance, provided it is convenient for the bee-keeper. Bees have stored large quantities of honey in hives on the roofs of high buildings in the centre of cities, and in other out-of-the-way places.

The first Italian bees in Maine, easily distinguishable from the natives, were seen twelve miles from their hives. It has been shown again and again, that the distance traveled by bees was at least five and six miles, and that they went that distance from choice, when pasturage was nearer.

The gardener has 5 colonies. If they are in box-hives, he must watch them closely in swarming time, and this will be no task, because he is nearly all the time engaged in other work. When the swarm appears, he has only to hive it and place it with the others. Of course the hives must be in readiness beforehand. If the gardener's interest prompts him to use the movable frame hive, he may know to a day when his bees will swarm, by an examination of the brood-nest. For example, if he examines every hive on Monday, and finds no queen-cells begun, he may know that no swarm will appear for a week at least. This is a great advantage, because with the knowledge obtained by examining the hives, he may be away from home several days, and know that no swarms will issue during his absence.

But the product of honey is not the only profit to the gardener. Perhaps the greatest labor for man performed by bees is the distribution of pollen from flower to flower. It is believed that the bee is profitable to the farmer, even if not an ounce of honey be produced for the farmer's use. A gardener in Southern New England raises early cucumbers under glass. There will be no fruit unless the flowers are fertilized, and for this purpose a colony of bees is placed in the greenhouse. A florist employs bees for the same purpose, keeping the hive inside the house at first, and afterwards moving it into the garden.

Bee-keeping stands upon its merits, and is profitable as a separate, a sole industry, and with small farming and gardening it is particularly agreeable, inexpensive and satisfactory.

Providence, R. I.

Create a Home Market.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, **5** cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Local Convention Directory.

1886. *Time and place of Meeting.*

July 6.—Hill County, at Peoria, Tex.
H. A. Goodrich, Sec., Massey, Tex.

July 16.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Much Swarming.—A. F. Currier, Du Plain,⊙ Mich., on June 28, 1886, says:

I have a colony of bees that cast its first swarm on June 1; another in a few days, and both large swarms; on June 12 it cast another fair swarm, and on June 13 I found two queens in the parent hive. I started with 7 colonies in the spring, and I now have 24. Some that have swarmed three times are working in the sections well.

Plenty of Clover, but no Bees.—R. G. Hogue, Loydsville,⊶ O., on June 28, 1886, writes:

I am in hopes that many more will deem it a necessity to become members of the Bee-Keepers' Union. It does not look right for a few to stand good for the whole band of bee-keepers, which is virtually the case; for the word will go abroad that the bee-keepers have formed a Union for self-protection, and any person that hears of it would rather compromise a difficulty with a bee-keeper than run the risk of getting into the clutches of such a Union. This has been a very good season until last week, when it turned so wet that the bees have done nothing for a few days. A great many bees have died during the last winter in this neighborhood. My count last fall was 24; this spring 4. It looks like a great waste to see so much white clover and scarcely any bees to gather the nectar from it.

Good Clover Crop. — E. Pickup, Limerick,♂ Ills., on June 24, 1886, writes:

We are having mostly cool nights and mornings, with showers, which shorten the day's work for the bees; yet white clover is good, and they fall with their loads. I seldom see them fill up so in the sections between the first and second swarms; also after swarming 3 or 4 times, in a few days they are in the sections again; some have stored 40 to 60 pounds, and cast several swarms. I am tiering up my new colonies to keep them from swarming, as some did 10 days ago.

Number of Frames for Winter.—Master R. B. Ross, of Montreal, Canada, on June 22, 1886, writes thus:

Please tell me how many combs to leave for winter supply in each hive.

An older person (probably his father) adds this explanation:

This is from a little subscriber to your Journal, 9 years old. He has two hives (with 8 movable frames in each), and he wants to know how many of these frames should be left in, for a strong colony for winter, after the one-pound sections in the surplus department are taken away.

[Our young subscriber is welcome to send in a question. We are glad he has been so thoughtful as to calculate ahead about preparing his bees for winter. Four frames will be sufficient to leave in each hive for winter. They must each contain about five pounds of honey for the bees to live on during the winter months. Each colony should have bees enough to fill the spaces between these frames. —Ed.]

Sweet Prospects. — Eugene Secor, Forest City,♂ Iowa, on June 25, 1886, writes:

It is only about two months since the bees were removed from the cellar, and 25 colonies worked for comb honey have stored nearly 1,000 pounds. White clover has been very abundant and very rich in nectar. The sections that I am taking off rival in whiteness the celebrated California product. Linden will soon be in bloom. If that yields well I am going to have the best crop of honey I have ever secured.

Good Prospects for Basswood.—S. H. Mallory, (68—104), Decatur,♀ Mich., on June 28, 1886, says:

Bees have been doing well for two or three weeks on clover, although quite dry until within a few days. We are having plenty of rain now, almost every day. I never had a better showing for clover honey so early in the season, and basswood yet to hear from, which is about coming into bloom, and looks fair for giving a big yield.

Too Much Swarming, etc.—D. F. Park, Athens,♂ Pa., on June 28, 1886, says:

I wintered 60 colonies of bees on the summer stands without loss, excepting three that were queenless. The early season put them in good condition for white clover, which has been profuse in bloom, but the weather has been too cold and dry for the best results. My first swarms began on May 18, and have filled up their sections. The old colonies are doing very well, but are swarming too much for my comfort, being largely in excess of any former year. There is but little sale for bees or honey in this section. I have heretofore used full sheets of foundation in brood-frames, but this season I have put in one-half size, and I get just as good results.

Pleased with the B. K. Union.—John Rey, East Saginaw,⊙ Mich., writes:

I think that the National Bee-Keepers' Union is but a small "nucleus" yet, considering the thousands of bee-keepers there are in our land of honey; but if we will only take a lesson from our little, busy bees, we will soon increase to a large "colony." Remember the larger the "colony" the better the defense. I, for one, am well pleased with the Bee-Keepers' Union, and I only wish that it may live until the last bee dies in our land.

Who Owns the Bees?—W. R. H., Mt. Carroll,⟜ Ills., on June 18, 1886, writes thus:

Just at sundown my bees swarmed and left. I followed them. They went directly towards my neighbor, one-quarter of a mile away. As they went over my neighbor's barn-yard, his hired man saw them and commenced pounding on pans, etc. The bees went directly into my neighbor's hive. Most of them were in before I got there. Who owns the bees, my neighbor, his hired man, or myself? I immediately took the bees out of the box-hive and put them in my own, but left them there. If the bees are mine, what should I pay my neighbor (he don't claim them); or what should I pay the hired man (he claims them)?

[The bees are yours by all points of law. If any of your neighbor's property was injured or destroyed by the transaction, equity would say: Pay him for it. If the hired man was put to any expense, or used time not already sold to his employer, pay him for it. He certainly has *no* claim on the bees, either in equity or law. If his time belonged to his employer, settle with your neighbor for that.—Ed.]

Very Fine Season.—E. T. Jordan, Harmony,⟜ Ind., on June 24, 1886, writes:

This has been a very fine honey season until the last few days, which have been cool and rainy. There is an abundance of white clover, and a limited amount of basswood which is beginning to bloom. I extracted my first honey on May 24. Up to June 23

I had extracted from the upper stories of 22 colonies 1,767 pounds of honey. This season's honey is a shade lighter than last season's, and of very fine flavor.

National Bee-Keepers' Society.—Mrs. L. Harrison, Peoria,⊙ Ills., writes:

At the last meeting of the North American Bee-Keepers' Society, at Detroit, St. Louis, Mo., was taken into consideration as the second place of meeting of this Society, Mr. Dadant and myself favoring that location. Do the bee-keepers of the South and West favor this location? If so, will they give it their hearty support? It would be well for those thus located, to express their views before the next meeting at Indianapolis, either through the BEE JOURNAL or to Mr. Dadant or myself. A place of meeting, wisely chosen, has much to do with the prosperity of the Society.

Introducing Queens.—L. J. Keyes, Nora Springs,♂ Iowa, on June 23, 1886, asks:

In introducing a queen to the hive, are her attendants put into the introducing cage with the queen, or only the queen herself?

[Only put the queen in the introducing cage. Let the accompanying bees fly away. Their presence in the hive would be annoying, and might result disastrously.—ED.]

Bees Doing Well.—Ernst Bernschein, Ft. Dodge,⊙ Iowa, on June 30, 1886, says:

We are having very dry weather just now, but bees are doing very well gathering honey. There has been but little swarming so far. We are about two weeks ahead this season, and our prospect is very good for a honey crop. I have 88 colonies of bees of my own, and 12 which I am keeping on shares.

Enlisted for the War.—Dr. Geo. H. Kidney, Birmingham,⊙ Ala., writes on June 24, 1886:

I wish to become an active and living member of the National Bee-Keepers' Union. I am bound to help our cause to the uttermost in every way, if it costs twice what is asked. Let us have a decision on that California case that is just. Witnesses should know concerning what they swear about in such cases.

* * *

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "It is not convenient for me to send the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

BEE JOURNAL

Issued every Wednesday by

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PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

* * *

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

* * *

Frank Leslie's Popular Monthly for July is full of good things. "Camping Out" is an attractive subject in this weather, and Mr. W. P. Stephens's article with its breezy pictures certainly tempts one to try it. Liszt, the great composer and pianist, is so widely known that this sketch of him comes in very aptly as an introduction to the article by Dr. Pearce on "Modern Music Schools," full of notes of the past and suggestions for the present. "A Turkish Dinner on the Nile" is a pleasant traveler's sketch. The stories in the July number of this popular magazine are like the articles—bright, breezy, just suited to reading in sultry days.

* * *

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00.

* * *

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

* * *

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 5, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—The new crop of honey is coming forward quite freely, and looks well; demand is light, however, at 14 to 15c. Extracted, 5 to 7c. per lb.

BEESWAX.—Scarce at 25c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—New honey is coming forward freely. The quality is exceptionally fine and the crop will be large. White to extra white comb, 9@11c. Extracted, 4@4½c. for white; 3½@3¾c. for amber.

BEESWAX.—22@23c.

O. B. SMITH & Co., 423 Front Street.

DETROIT.

HONEY.—There is a little new honey in the market, and is selling at 13 cts. for white in 1-lb. sections. The demand is limited, however.

BEESWAX.—Firm, at 25 cts. per pound.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—The demand for extracted honey has been very light of late, but it seems to be improving gradually for manufacturing purposes. There is considerable honey in the hands of commission merchants, and prices are very low—3½ to 7 cts. per pound is the range of prices. Prices of comb honey are nominal.

BEESWAX.—Arrivals are good and the demand fair. We pay 18@22c. for fair to choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Our new crop is arriving freely and is very fine. Sales are slow and prices low. One-lbs., white clover, 14c.; dark 1-lbs., 10 to 11c.; 2-pound white clover, 12c.; dark 2-lbs., 8 to 10c.; California 2-lb., white sage, 10 to 12c.; dark 2-lbs., 8 to 9 cts. Extracted white clover, 5 to 6c.; dark, 3 to 4 cts.; California white sage, 5 to 5½c.; dark, 4 to 4½c.

BEESWAX.—20 to 22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The demand is limited but the supply is very much better in quantity as well as quality. The new crop receipts are very fine. We quote: Choice white in 1-lb. sections, 16@17c.; same in 2-lb. sections, 15@16c.; dark, nominal, 10@15 cts. Extracted, choice white in tin, 7@9c.; same in barrels and kegs, 6@7c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The market is very much depressed. Sales of water white extracted have been made at 3½c. Some of the honey coming forward is in light weight tin so poorly soldered as not to bear handling, occasioning trouble and expense to the receiver and waste and loss to the shipper. White to extra white comb, 8 to 10c. Extracted, white liquid, 3½c.; light amber colored, 3 to 3¼c.

BEESWAX.—20@23c.

SCHACHT & LEMCKE, 122-124 Davis St.

* * *

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows :

For	50 colonies (120 pages)............	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages ; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and a Voting Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year ; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Voting Blank.

◆

Job Lot of 2-lb. Sections, Cheap.—See our offer of a job lot at $3.50 per 1,000, on page 432. If you can use this size of section, there is a bargain for you. They can be shipped the same day the order is received.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices : 100 for $1.00 ; 250 for $1.50 ; 500 for $2.00 ; 1,000 for $3.00 ; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Special Sizes of Sections cause much confusion ; and if such luxuries are indulged in they should be ordered long before the "rush" comes, in May and June. Special sizes cost more, and when ordered during the "rush," create considerable dissatisfaction by the consequent delay in getting them made. We have a lot of special sized two-pound sections 5¼ inches high and 6 inches wide, narrow tops, and square groove, which we can ship instantly at $3.50 per 1,000. They are 7 to the foot.

Advertisements.

35 CTS. per lb. for best Brood Foundation made from pure yellow beeswax.
27A2t G. PROCHNOW, Mayville, Wis.

ITALIAN Bees & Queens at reduced prices. Address, **OTTO KLEINOW,**
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THREE-FRAME Nuclei, with Queen, $3.25 each—all pure Italians. Young Queens $1 each. M. ISBELL, Norwich, N.Y.
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ROOT'S Simplicity and CHAFF HIVES, Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand.
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Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

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Langstroth Hives
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ITALIAN QUEENS, by Return Mail, Tested, 1.00. Untested, 75 cents.
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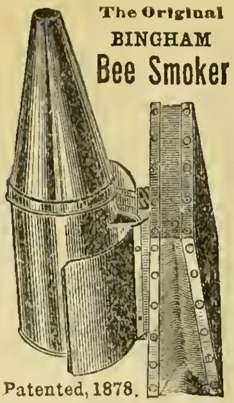

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BINGHAM
Bee Smoker

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F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
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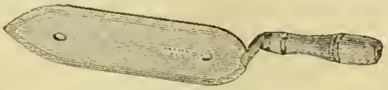

Patented May 20, 1879.

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Doctor smoker (wide shield)	3½ inch	$2 00
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Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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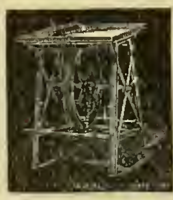
BARNES' FOOT-POWER MACHINERY.



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ON account of scarcity of money, I will sell my **Warranted Queens** at $8.00 per dozen, or 2 dozen for $15.00.
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Prices Reduced.
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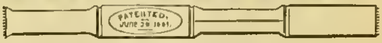
SECTIONS.



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J. FORNCROOK & CO.,
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☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

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AFTER June 1st, 1-frame Nuclei, with untested queen, $1.50; with tested queen, $2.50. Two-frame Nuclei, with untested queen, $2.00; with tested queen, $3.00. Queens from 75 cents to $3.50. For more frames in nuclei, add 50 cts. for each extra frame, and 50 cts. extra if with selected queen. These prices are for Italian or Carniolan queens, and by the dozen; for less, add 10 per ct. Write for price-list.
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We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to

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For the manufacture of
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Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
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READY JUNE 1, 1886.

WARRANTED	Queens,	by mail		$1 00
"	"	"	per ½ Doz...	5 00
SELECT	"	"	each	1 25
"	"	"	per ½ Doz...	7 00
TESTED	"	"	each.........	1 50

By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.

HENRY ALLEY, WENHAM, MASS.
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ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*

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A Year among the Bees,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

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BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

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HUMPHREYS' HOMEOPATHIC SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—**Humphreys' Medicine Co., 109 Fulton St., N. Y.**

American Apiculturist,

PUBLISHED under the management of one who has had 30 years' practical experience in Bee-Culture. Send your address on a postal card for a Sample Copy. Address,

AMERICAN APICULTURIST,
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BEE Hives and Sections—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

TESTED Queens. (Imported Mother), $1.25 each; $12 per doz.-O. N. Baldwin, Clarksville, Mo.
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Down, Down, Goes the Price!

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

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If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G. B. LEWIS & CO.,
WATERTOWN, WIS.
April 15, 1886. 16Wtf

40 CENTS per pound, boxed. VonDorn's Dunham Brood Foundation. **Circular Free. T. L. VonDorn,** *Omaha, Neb.* **None Better**
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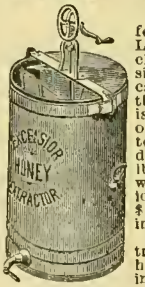
EXCELSIOR HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,		13x13	inches.....	...$8 00
For 2 Langstroth	"	10x18	"	.... 8 00
For 3 "	"	10x18	"	.........10 00
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For 2 frames of any size,		13x20	"	.........12 00
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DO YOU EAT CANDY?

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The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

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RIBBON BADGES.

We have some **ELEGANT RIBBON BADGES**, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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Select Tested **QUEENS, $1.50 each.** Warranted Queens, **75c.** Per doz., $8.00. Strong three-frame Nuclei, with tested Queen, **$2.50 each.**
☞ All Queens strictly pure Italians. ☜

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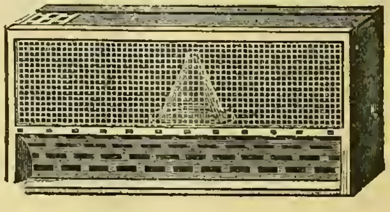
20A20t NORTH PRESCOTT, MASS.

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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MANUFACTORY

FOR HIVES, SECTIONS, &c.

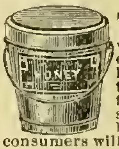
I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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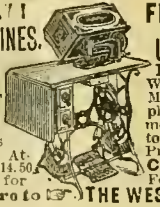
GIVEN AWAY!

SEWING MACHINES.

100,000

Newest and Best.

Black Walnut, Drop Leaf Table, Cover 3 Drawers and Full Set of Attachments, only $14.50, Cash or **FREE** for **29 Subscribers to** ☞



FREE HOMES
IN THE
United States.

How to Get Them. Where to Invest Money or find Employment, told in the most widely-circulated paper published. Price $1.00. Send to **CHICAGO, Ill.,** For Sample Copy of

THE WESTERN WORLD.

Vandervort Foundation Mill.

6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. July 14, 1886. No. 28.

A Summer Picture is thus given by a correspondent in the *Youth's Companion* :

A cloudless sky, and a stretch of meadow
  Dotted with daisy and clover blooms ;
A farm-house old, in the white trees nestled,
  And hum of bees in the lilac plumes ;
Tassels of alder so tenderly swaying,
  And flower-bells swinging in every breeze ;
A song of bird from the woodland shadow,
  And carol of joy in the budding trees :
A lake's dark calm in the distance lying,
  With cliff's gray turrets reflected deep,
And flag-fringed shores where the trees are bending
  O'er stilly shades where the lilies sleep.

◆

Bees are of great benefit to the fruit-growers and horticulturists, but they seem not to realize it—or at least many of them pretend not to know it.

◆

In New York there is to be an apicultural station. The *Bee-Keepers' Magazine* says : "We are glad to note that the Empire State is about to have an apicultural station of its own. Prof. J. Henry Comstock, Professor of Entomology, at Cornell University, is making an effort, we understand, to establish a department of apiculture in that institution. We hope he will be successful in his endeavor, and we shall be most happy to do everything in our power to help him in his work."

◆

"**Bee-Culture** is to be distinguished from bee-keeping ;" says the Rev. O. Lawson, "because the latter, if it implies merely the careless and neglectful possession of one or more colonies of unfortunate bees, will invariably be found both uninteresting and unprofitable ; for in this, as in all agricultural pursuits, want of care and of that degree of skill which is to result from care, will lead to disappointment and failure. But on the other hand, it is claimed that bees, with good management and timely attention, need but little of either, but what they do need they need imperatively—at the right season, and can be made a source of both pleasure and profit."—*Indiana Farmer.*

An Old Bee-Gum.—The following is a fine specimen of ignorance about bees, and we print it *ad literatum :*

Letcher Co Ky June 20, 1886 Jents—as to how Longe will Bies Liv in hives befor they die out I will say to you I owne a bie hive that is a bout 30 years scena Seence I put them in agum and they ar Still a live and working it is the oldes hive of Bies I ever new I want to now if any has any older bie-hives pleas publish it in your paper.

Yors truly J. B. Clay.

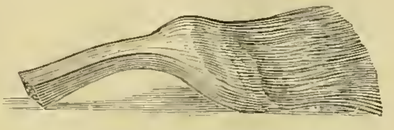
Mr. Clay's old "bee-gum" reminds us of the boy's old jack-knife; it was very old; had seen a good deal of service; had worn out several blades; and the old handle had been replaced with a new one,—but it was the same old jack-knife! ! Just so it is with Mr. Clay's old bee-gum—it is 30 years since he put the bees into it! From fifty to one one hundred generations of bees have occupied that gum; and twenty or thirty queens have succeeded one another—but it is "the same old gum;" and the bees he put there 30 years ago "are still alive and working!" It is "the oldest hive of bees he ever knew!"

Mr. Clay stands upon the pinnacle of fame—he has the most wonderful hive of bees in the world—he looks over the timber and prairie, and congratulates himself upon having the oldest bee-gum in existence. He proudly asks, does any one know of any older bees? Ordinary bees live only a few weeks, or a month at most, but his bees which he put in that gum 30 years ago "are still alive and working," and "don't you forget it." Extraordinary old bees! Wonderful old bee-gum ! ! Happy old Clay ! ! !

◆

The Yucca Brush is employed for removing bees from the combs. Mr. W. W. Bliss, of Duarte, Calif., speaks thus concerning them :

Ever since the invention of the movable comb hive, has there been a demand for something suitable for brushing the bees off the combs. Quite a number of articles have been brought into use for this purpose, from a goose-quill to a bunch of grass. The latest as well as the most effective article for this purpose is the yucca brush. The species of yucca (*yucca bacata*) from which these brushes are made, are a native of Southern California. They grow in vast numbers along the foot-hills and mountain sides; when in bloom, their towering shafts of white flowers can be seen for several miles. Their growth somewhat resembles the century plant, but having a greater number of leaves, which are about one inch broad and two feet in length, tapering to a point, where they are armed with a sharp thorn like a century plant. For this reason they are cometimes called Spanish Bayonets. The yucca, like the century plant, dies when it blooms; just how old they are before they bloom, is not known, After the plant blooms and has died, the leaves are gathered and made into brushes as here shown.



They are a soft, vegetable fiber and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever.

The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy without having to hunt for one. We can supply them at 5 cents each, or 50 cents a dozen.

Bees in Cyprus during February are thus described by Mr. Frank Benton in his Larnaca Circular :

The winter seems to have been severe all over Europe and in all Mediterranean countries, but while in more northern climates my bee-keeping friends write they were buried in snows, I was away off where the winds blow from Africa's Great Desert and at the beginning of February was hiving swarms and extracting beautiful rosemary honey. Colonies that had not gotten short of stores during the months of December and January, and were protected from rains so their hives were dry inside, were quite populous, some of them occupying twenty-four frames, twelve to fifteen of them fairly filled with brood. February 15th, I counted eighteen frames of brood in one hive, each frame having 120 square inches; 350 queen-cells formed by a single colony preparing to swarm, were counted on twelve frames. Here in Cyprus the colonies are less advanced, for even Cyprians cannot get honey out of bare rocks and barren sand.

◆

Over $250.00 in Premiums are offered at the St. Joseph, Mo., Inter-State Exposition which opens August 30, 1886. A bee-convention will be held on the Monday following. Send to the superintendent, J. G. Graham, Agency, Mo., for a premium list.

◆

Bees at the Zoological Gardens in Philadelphia, Pa.—Mr. Arthur Todd, on July 5th "opened up" a bee-exhibit at the "Zoo," with a lecture upon "the habits of the bees." A similar lecture will be given every Wednesday at the same place. The *Public Ledger* of June 29th, contained the following notice concerning it :

Preparations are now being made at the Zoological Garden to add to the interesting features of that place a permanent collection of bees, so that the visitors may be shown something about bee-keeping and given an opportunity to study the habits of the insects in question. It is expected that the collection, which will probably comprise about 15 hives, will be taken to the Garden very shortly by Mr. Arthur Todd of this city. Superintendent Brown says that Mr. Todd will have a supervision over the exhibition, and it is proposed to make an arrangement with him whereby he will deliver lectures at the "Zoo" from time to time about bee-keeping, so that those who are interested in bees can obtain practical information about the way of caring for them, etc. A one-story frame building opposite the monkey-house, which was formerly used as a photograph stand, and contains two rooms, will be converted into an apiary. In the back room three glass cases have already been placed in position on small stands, it being intended to utilize the cases for bee-hives. These cases are put close to the back wall of the apiary in such a manner that the bees will be able to escape out into the garden by means of holes cut in the wall.

A plot of ground, about 20 feet square, situated near the bear-pits, is also being enclosed with a wire fencing in order that an ordinary colony of bees may be placed within it, thus forming another interesting feature of the bee-exhibit. Superintendent Brown says that a fear is sometimes expressed on the part of persons visiting bee-hives that they may be stung, but considers that, with the methods now employed in the systematic care of bees, there is but little danger of any one being so injured.

◆

Oldest Apicultural Publisher.—In *L'Apiculteur* M. Hamet says he is the oldest member of publishers of bee-literature.

The *Apiculteur* is in its thirtieth year, and besides this he has issued several other publications. By the end of 1886 he will have issued 70,000 volumes and pamphlets, viz., 40,000 vols of *L'Apiculteur*, 18,000 vols. of *Cours d' Apiculteur*, 8,000 *Calendiers apicoles*, 4,000 *Anesthesies*, and several others jointly with other authors.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Separating Swarms.

Query, No. 277.—1. At swarming time it often happens that two or more swarms issuing at the same time settle altogether; what is the best plan of separating them? 2. Is it true that they will separate themselves if put in a very large box so that they might be dipped up, each swarm by itself, and hived? But is it not possible that the bees of several swarms being mixed up, that any or all of the queens may get killed? I mean all these swarms to be prime swarms with laying queens. 3. Or is it necessary or best to divide them immediately, giving a queen to each division made? This latter plan I have practiced, but I find it very inconvenient in the middle of the day, and I am afraid to postpone the operation until evening. What can you offer as better or best?—C. W.

Clip all the queens' wings, then the queens can be caught, and all will be well. This fact alone is enough to make clipping desirable, were this all. —A. J. COOK.

1. Keep them apart with the Fountain Pump, if possible, and when they do get together, just how to perform is too long a story for this department. 2. Sometimes. Experience and tact are needed in these cases, and each case may need different treatment.—JAMES HEDDON.

It would take a long article to explain all the methods of dividing two swarms. But it should be done when hiving, as they will *usually* mix and kill either queen, or both.—DADANT & SON.

The answer to this would require an article to do the subject justice. 1. Put one-half in one hive and one-half in another hive. Catch a queen if you see her. When one swarm shows signs of queenlessness give it the queen caught. 2. I have heard so, but I have never tried it. There would be danger of the queens being killed. 3. I can offer no better plan.—W. Z. HUTCHINSON.

1. My plan is to hunt up the queens, cage them and divide the bees as nearly equal as possible. 2. Sometimes they separate, but more often they do not. Many things in bee-keeping will be found inconvenient; so they will in any other business. We must take things as they come, and be thankful that they are no worse.—J. E. POND, JR.

Divide all swarms as soon as possible; for directions see any of our leading works on bee-culture. 2. This is not true in my experience. 3. This would be my plan of operation. It may be a little inconvenient, but it will be successful.—H. D. CUTTING.

It is easy enough to divide them if a swarming-box is used and a queen given to each; but my plan has been to hive all together, taking away all but one queen in hiving. The contracted brood-chamber is used with queen-excluding honey-board (zinc and wood), and enough section-cases piled upon it to accommodate the whole part of the cases being taken from the hives of the colonies casting the swarms.—G. L. TINKER.

1. I think I should hunt out the queens and divide the bees equally among them. 2. They might happen to separate, but I should generally expect all but one queen to be killed. 3. I doubt if you can better your present plan, but as my queens are clipped, I have had little experience. —C. C. MILLER.

1. Every one will have to decide this for himself. 2. Yes, as a general thing. On several occasions I have lost queens from this cause. 3. I used to practice the same plan you here mention, but not with uniform success. I now keep a wide hive that will hold 20 frames, that has an entrance extending the full length of the hive. I fill it with combs, and hive the whole of the "pile" in the wide hive, strewing them all along the entrance. After they have divided off I lift out each division on the combs and put them where I want them.—G. W. DEMAREE.

1. Have the queens' wings clipped, and you can handle them as you please. 2. This is very doubtful. 3. Hive the two together, giving lots of surplus room if you do not care for increase. Having the queens' wings clipped does away with all this trouble. I have had as many as 11 swarms all together, but as I had all the queens, it was easy putting one-eleventh of the bees and one queen into each hive.—G. M. DOOLITTLE.

Paralyzed Bees.

Query, No. 278.—A colony of bees in a log sawed off and set upon end has wintered well for seven winters, and came out strong this spring, apparently prospering, until seven days ago when the bees began to crawl out in a paralyzed condition, with their tongues run out. They would turn over, and kick, and soon expire. A quart of bees each day for seven days past has crawled out and died. I broke out some comb, and found from the egg to the full-grown bee in apparently healthy condition. There is plenty of sealed stores in the hive. What ails the bees?—Maine.

If a colony of my bees acted that way I should suspect poisoning.—G. L. TINKER.

I do not know unless they are poisoned.—W. Z. HUTCHINSON.

This seems a disease which ought to be carefully investigated. It has appeared in many States, from Iowa to Maine.—A. J. COOK.

Take some of the honey and feed to some nucleus, and see if it is poisonous. If it does not affect them, then you will know that it is not the honey that is at fault.—H. D. CUTTING.

I could not judge the case at this distance. I prefer to believe that robbing was going on, and the bees that crowded out in a paralyzed condition had been stung. Sometimes bees carrying on robbing in a stealthy, mysterious way, and may puzzle almost any one to discover the trouble.—G. W. DEMAREE.

This peculiar disease has been mentioned several times, but as yet no one has either ascertained the cause or made public a remedy. It is one of those things that cannot be explained without an examination, and possibly could not even then. Are the stores pure? or may not the bees have brought in some poisonous honey?—J. E. POND, JR.

Ants in the Hives.

Query, No. 279.—Upon examining a colony of bees the other day, I discovered countless numbers of small black ants in the top part of the hive. (I have tried salt and chalk-marks, but they do not seem to mind it). What is the remedy?—W. M. B.

Try borax. I have never found that the ants did any harm, except the annoyance on opening the hives. —C. C. MILLER.

They are there for warmth. I find it easy to dislodge them by simply brushing them off.—A. J. COOK.

Give the ants no lurking place. Have no crack where the ants can go and the bees cannot follow.—W. Z. HUTCHINSON.

They get there for warmth, and do no injury except to annoy the operator when the hives are opened. I know of no remedy except to be happy in thinking the ants are having a good home.—G. M. DOOLITTLE.

Put green tansy in the top of the hive and you will not have any ants to trouble you. They do not seem to disturb the bees. It is such a nice place for them to hatch their eggs over a good, warm colony.—H. D. CUTTING.

I have seen ants around my bee-hives, but never experienced any loss from them. A good colony will not let them enter the hive; they lodge in its crevices about the outside to enjoy the heat from the bees. Trouble from ants is mostly imaginary.—JAMES HEDDON.

I use *wet* salt and find it effective. Dry salt is of no value for this purpose, and I infer that many have failed to derive benefit from the use of salt because they use it in a dry state. The adult ants do not care for salt much, but wet salt destroys the ant larvæ and eggs, and ants will not lodge in a place where they cannot rear young.—G. W. Demaree.

Get an atomizer and spray them with equal parts of carbolic acid and alcohol. This is a certain remedy and will do no harm if it does not reach the bees. In cool weather long strings of small red ants may be often seen entering hives, but they do little harm as compared with the little, flat-bodied black ant, which is a real pest, and makes a habitation of the top part of the hive.—G. L. Tinker.

If the ants actually trouble the bees place the legs of the hive-stands in cups of water, and sprinkle powdered borax in the tops of the hives. Find the ants' nests and give them a dose of borax or kerosene. I have driven ants away by the use of borax. If the colonies are strong they will not be injured by the ants, and will probably drive them out finally.—J. E. Pond.

* * *

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Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices :

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* * *

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CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⟜ northwest: ⊸ southeast; and ⚲ southwest of the center of the State mentioned.

For the American Bee Journal.

Winter Depositories for Bees.

C. P. HEWETT.

I do not consider a cellar under a dwelling a fit place for a depository for wintering bees. They do not get that quiet that they should have. Neither do I think that ventilation is as essential as other conditions and surroundings—such as cold, dampness from the cellar bottom and walls, and the floor is not sufficient covering to give them the dry temperature that they should have. Ventilation of the hives is quite important. One may have the best depository in the world and yet the bees may be destroyed by not giving the hives proper ventilation. Artificial heat is the worst thing that can be given them. A depository should be out of reach of frost, and then with good ventilation, the temperature may be controlled almost to a degree.

As for stores, I cannot see any difference—I am using syrups in some of my hives. My depository is in a sandy knoll. I dug three feet and set in a regular frame and boarded it up tight. This frame I made five feet in height with a gabled-roof. I then covered it with straw and earth one foot in depth, then covered that with marsh grass. I put two ventilators 4x6 inside, one at the end from the door and one eight feet from the door; this place is 8x24. I then put in a ventilator coming in at the bottom under the frame. This ventilator comes under the door and runs under the ground about sixty feet, and is four feet under ground, 4x6 inside. It continues in the shape of a drum the whole length of cellar, and after putting my bees in, I cover this with loose boards and then cover the whole bottom with chaff one foot in depth, so what air comes through into the cellar comes through this chaff.

My hives are on shelves, and are so constructed that air can pass clear around the cluster, but not through it, and pass out at each corner through the top of the hive. I use no cushions; I have no use for them.

I venture to say that there was not one pint of dead bees from my 74 colonies. When I open the door it is very light and strikes square into some of the hives, and one might easily think that there was not a living bee in the hives, they are so quiet, but upon putting the ear to the hives and giving them a tap with a finger they would respond.

A neighbor who had a few colonies in with mine, went in with me on January 15, to see how they got along. The first hive he came to he said, "I guess they are dead." He put his ear to the hive and gave it a tap and found they were alive and all right.

In order to get hibernation, all conditions must be complied with to bring it about. November is the month for bees to commence hibernating in this latitude, as much as June is the summer month. A word about pollen. If bees are put into winter quarters and the condition of the depository is such that they cannot hibernate (or nearly so), and they go on a racket all winter, I think then it would be a good plan to have no pollen in the hives; but if they are so handled that they hibernate, then I would prefer the pollen in the hives. There should be bees enough in the depository so that when the ventilators are closed the temperature would gradually rise, or the ventilators would be of no use. Hibernation does not set in very rapidly; sometimes it will take weeks, with the best conditions, but continual treatment will bring it about. The time is coming when apiarists will look into this matter. A depository in which bees will not hibernate will be a thing of the past.

Kingston, Wis.

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For the American Bee Journal.

"Building Worker-Comb," etc.

W. Z. HUTCHINSON.

Had Mr. Mitchell (see page 410) put on upper stories at the *time of hiving*, instead of waiting six or seven days, he would probably have arrived at a different conclusion. The upper stories should be furnished with combs or foundation, and a queen-excluding honey-board used to keep the queen below. The "replies to queries" are necessarily brief, but had I supposed that *anybody* waited six or seven days after hiving a swarm before putting on supers, I should have explained a little more fully. If Mr. M. has the Bee Journal for 1884, on page 745 of that volume he will find the subject treated exhaustively.

I may say this much, however, when honey is coming in freely, and the bees are compelled to build comb in which to *store their honey* (not to rear brood) they will build store or drone comb; but if they are given access to a super containing comb or foundation they will store their *honey* there, while in the brood-nest they will build worker-comb and fill it with *brood*.

Mr. Mitchell reports exactly the condition of things that I should have expected with such management as he gave.

I do not belong to that class who cannot "buy a few pounds of foundation," as I shall probably use 100 pounds of it this season, but *not* in the brood-nest, as I have experimented until I am satisfied that I use it there only at a loss.

I have hived between 40 and 50 swarms this season in the new Heddon hive; they have all built their own combs in the brood-chamber, and I do not *think* there has enough drone-comb been built to fill *one hive;* while the combs are as straight and true as one could wish.

Rogersville, Mich.

Read at the Cynthiana, Ky., Convention.

How to make Bee-Keeping Profitable.

C. F. MUTH.

The experience of some of the past years has been hard on bee-keepers, as well as on farmers, manufacturers, and every other branch of business. There is, apparently, an over-production, or there is no demand, and many times sales could not be made unless at low figures. Business was unprofitable to manufacturers and merchants. Again, the misfortune of the farmer, *i. e.*, cheapness of produce, was the good fortune of the masses. The ever restless change of time does not allow us to despair; for, sooner or later, matters will turn again in our favor, and only the week-kneed will fail. The low prices of corn, hogs, etc., being at times in many localities, below the cost of production, should as soon induce farmers to quit, as the low prices of honey should weaken the interest of the bee-keeper. We must produce and stimulate consumption. To find a market is, although secondary, of as great importance as production, and every individual interested should do his share in this respect. Just as the fruit-farmer or gardener supplies his neighbors, so should the bee-keeper. He can realize better prices when retailing, and, if his crop is larger than his retail trade requires, let him sell the balance to a dealer.

The idea advanced by some, to avoid all middlemen, is absurd. A fair dealer, although he cannot do without a profit, takes upon himself a larger amount of work, and is under a heavier expense than most producers imagine; and he finds a market for more surplus honey than a thousand or more producers could do. It is to the dealer's advantage to obtain good prices, and this re-acts on the producer, who shares in the profit. Let us, however, expose all adulterations, that our honey may have a respectable name. Some enormous adulterations, which are very profitable to the operators, are practiced in this country; these increase the so-called stock on the market many times, fill the consumer with distrust, and create a dull market. Every vocation has its drawbacks and unpleasantness, and bee-keeping cannot be expected to be an exception to this rule. It has proven detrimental to many to confine themselves to bee-keeping alone. The same has been the case with other specialties; and in order to avoid such disappointments, we should not "hazzard our fortune on one number."

Honey has made good headway in proving a table necessity, and is becoming a competitor with cane-sugar for manufacturing purposes. To produce a full crop should be our object. The best manner in which to accomplish this is the aim of this article.

As a number of different bee-keepers, with more or less knowledge of the business, are to be reached, and, in order to save repetition, allow me, here, to reproduce an article written by me, some time ago, for the *Commercial Review*, which, although intended for the beginner, rather than for the experienced bee-keeper, may make the *modus operandi* of honey-production more comprehensible to many:

"BEE-KEEPERS OF THE PRESENT AND PAST."

When, twenty-five years ago, the bees would swarm it would create an excitement and a sort of feast in the farmer's family. Old and young would ring bells, drum on tin pans, and make as much noise as possible to cause the swarm to settle. When this was accomplished, *pater familias* would put on his bee-jacket, gauze-wire face in front, tie up his sleeves and trousers, put on a pair of mittens, and carefully approach the swarm. A white cloth was spread under the limb or bush on which the swarm had clustered, and a good stroke landed the swarm in the box beneath, which was then placed on the cloth and left there until dark, when a new place was assigned it. The job was considered a good one, if the "king" had been secured.

The farmer next proceeded to take the honey. All the combs the old colony had built in the upper part of the hive were cut out, placed in crocks or buckets, and taken to market; or they were broken, the liquid honey pressed through a cloth and preserved for future use. This honey was taken from the hive at a time when the remaining bees could least spare it; as all the old bees, which are the sole honey-gatherers, had left with the swarm, leaving behind them only young bees, which, for the first eight or ten days, are nurses and comb-builders and do not leave their hives until after that time. Consequently they would starve to death with flowers around them ever so full of nectar, if, unfortunately, not enough honey was left in their brood-chamber, to examine which the farmer of those days would never have thought of.

The queen is the only perfectly developed female in the colony, lays all the eggs, and is the mother of all the bees. Her fertility is so great that she will lay 3,000 eggs per day when in her glory—*i. e.*, during the time when the colony is prosperous and honey comes in freely. Worker bees are imperfectly developed females, and do all the work inside and outside of their hive, such as building new combs, preparing old ones for the reception of eggs or honey, foraging, etc. One can see plainly when they have been cleaning house. They take care of the brood; supply the larvæ with food, and cap the cells over (on the eighth day after the eggs are laid) when the larvæ have turned into nymphs—have taken the shape of bees. On the twenty-first day the young bees emerge from the cells. Of this, also, our good friend knew nothing. But, a swarm had left, was hived, and the first honey crop had been secured from the old colony. When a swarm issues, the colony has generally made for several days previous, preparations for queen-cells, *i. e.*, they selected a number of cells containing worker eggs, which would ordinarily produce their like; they build these cells longer and larger, and supply the growing larvæ with the necessary food, when, in 16 days after the egg is laid, a perfect female, or queen gnaws through the capping. After she has fairly stretched herself and feels comfortable, one can see her running busily over the combs, and wherever she finds a sister's cell she bites it open, and, introducing her stinger, kills the young queen inside. No rival queens are tolerated in a colony. On her fourth, fifth, or sixth day, according to the weather and her own maturity, she takes her bridal flight, and if successful will lay eggs on the second or third day thereafter.

Of all this the bee-keeper of old knew nothing; and, if the queen's bridal trip had been unsuccessful, which is of daily occurrence, he would say the coming fall, that he had had bad luck with his bees, and that the bee-moth got among them. In the fall he had another crop. Every hive would be lifted, one after another, and, while the heavy ones were considered safe for wintering, the light colonies were doomed to the brimstone pit. His honey would be pressed through a cloth, together with pollen, larvæ, and other animal matter, and the combs rendered into wax. An average yield of 15 pounds per colony would be considered a good harvest.

Since the introduction of movable-comb hives, honey-extractors, and comb foundation, a system has been attained in bee-keeping. The bee-keeper of the present controls every part of the hive or colony. He knows that a swarm is at the expense of his honey crop, prevents all such desires of the bees, and make his swarms just about the time harvest is over. He does not believe that natural swarms are the best, because he can give his swarms made by division all the young bees they need, as well as all the honey, pollen, combs and a healthy queen. Young bees are the nurses and comb-builders. Without them no colony can prosper, and it is herein that a good many err. Bees over 10 days old are foragers, and detest housework so much that they absolutely refuse to accept a new queen when their own is lost, and their attempts to rear a new one have failed, and their nurse-bees have become foragers in the meantime. They (the workers) make, however, a desperate effort at self-preservation, and lay an abundance of eggs, not as the queen does in her own regular manner, depositing an egg in a cell, but as many as 10 or more eggs in a cell, irregularly dispersed over the combs. Their eggs being unfertilized produce drones only. The only way to save one of these colonies is to give it a few combs of hatching brood and adhering young bees from another hive, when they will readily accept a queen or hatch out a queen-cell given them.

It is not generally known that bees attain an age of only six or eight weeks in the summer. They wear themselves out with hard work. Their wings become ragged, when they fall an easy prey to birds, drop into the water, or perish in some manner. Thousands of young bees hatching daily more than make up for the loss. It is essential to know another item. Bees swarm when they are crowded. It is the queen which, by her restless roving over the combs, creates the swarming fever, when by a bountiful flow of honey her brood-nest becomes crowded, and she can find no room for depositing her eggs. In such cases she is one of the first to leave the hive, followed by the old bees, and the young able to fly. If, however, the workers become crowded for want of room to deposit honey, and this is generally the case, they start the commotion, a swarm issues, and the queen is one of the last to leave the hive.

In a well arranged apiary of the present day the combs are all movable and fastened or built in frames, so that each one may be examined and re-arranged at the pleasure of the bee-keeper. The most popular hive, and perhaps the most practical one, is the "Langstroth," because of its shallow combs and simple arrangements. It being the nature of the bees to store above their brood, there is the brood-chamber below, and the honey-chamber in the upper story of the hive. Ten frames of comb compose the brood-chamber, affording a surface of over 1,300 square inches, with a hatching capacity for over 60,000 young bees. The upper story, or honey-chamber, may be arranged for comb or extracted honey, to suit the fancy of the bee-keeper, but it should never be put on until all ten frames in the lower story are filled with brood, and honey is coming in. Whenever this precaution is observed, swarms will be the exception and not the rule, because plenty of young bees are emerging and the queen is kept busy refilling with eggs, their vacated cells.

Combs are built only during a flow of honey. When flowers cease to yield, all progress in comb-building stops. Combs are wax which is manufactured by the bees. They consume large quantities of honey when small scales of wax sweat out between the segments of their bodies; the bees take these from one another and form them into combs, clustering about the spot, and creating thereby the necessary heat for moulding their wax.

Close observation has shown that bees must consume about one hundred pounds of honey in order to fill their hive with comb, or manufacture four pounds of wax. It is here where the invention of comb foundation does wonders in the eyes of the uninitiated. Comb foundation is sheets of beeswax with the impression of cells made on each side with even greater regularity than if they were made by the bees. A brim of wax is left around each cell for the bees to finish it with. The bees make use of these improvements very readily and waste no time or honey with comb-building when supplied with foundation. After the cells are filled with honey they are emptied of their contents by the centrifugal honey-extractor, and given back to the bees to be refilled. This process is repeated as long as the season lasts, and the same combs can be used year after year. The result is an average crop per colony of 100 to 200 pounds of honey in a good season. Bee-keeping has now become an avocation, and honey production has become a profitable business. I am acquainted with bee-keepers whose product is from 25,000 to 50,000 pounds of honey annually.

Bee-keeping is divided into two branches, viz: queen-rearing, and honey production. The former requires close observation, strict integrity of the operator, and a thorough knowledge of the nature of the bee. Only a person with a strong inclination in that direction should follow exclusively that particular branch of the business.

HONEY PRODUCTION

is generally the aim of all bee-keepers as the most remunerative part of the business, and should, therefore, be also understood. It is a fact that while bees are kept by many there are but few good bee-keepers, and while honey can be produced by almost everybody in a good season, there are but few bee-keepers who can give a large average result per colony, or navigate their bees safely through a bad season or a severe winter.

The production of extracted honey pays best generally because it requires the least labor and expense. By good care the same honey-combs can be used year after year, and nothing is necessary but a good honey-extractor, a vessel or vessels for evaporation, and good barrels. Extracted honey will remain unchanged for any length of time if kept in a dry place, and there is almost no risk in transit when shipped; besides, more than double the quantity can be produced of extracted than of comb honey, even if sections are filled with foundation.

If comb honey is our object, we have to use sections, fasten starters under the top-bars, watch the progress of comb-building, and straighten up whenever we find an inclination of the comb to one side or other of the section. Dark combs are unsalable; consequently only white comb honey should be produced. After all the combs are nicely capped, they have to be graded according to quality, and offered for sale in neat shipping-cases, which should have glass sides, and hold no more than 20 to 25 pounds net. While one-pound sections are perhaps the most salable style for comb honey, two-pound sections are the next most desirable size. There is more or less loss connected by breakage with almost every shipment of comb honey, and if not sold during the same season the quality is apt to be damaged by the wax moth, or soiled by flies, dust, etc. However, the production of comb honey should go hand in hand, as experience will soon tell of which to produce the most.

Populous colonies in early spring are our "stand-bys" in the honey season, and to prepare for them we must commence in the fall. When bees are prepared for winter, every one of their combs should be ½ or ⅔ full of honey, with the lightest combs toward the sides of the hive. I prefer for the middle, two combs with their upper halves well filled. It is immaterial if part of the honey is uncapped, and immaterial if our bees have access to cider mills. The principal factor in safe wintering is plenty of honey within easy reach of the cluster, and a dry, healthy air in the hives. This can be accomplished in several different ways. My own way during late years has been to cover the brood-chamber with the 3 (so-called) "third covers," with which most bee-keepers are acquainted. The boards have generally shrunk somewhat, while the battons have not, which will leave a crevice between them of about 1-16 inch, when all bee glue is scraped off in the latter part of fall. These crevices will permit the exhalation of the colony to pass off, while a straw mat or its equivalent placed on top of the boards will prevent draft, cause a gradual renewal of the air, and retain the necessary heat. If the covers are tight an inch hole should be bored in one or two of them. A winter passage should be cut through the center of every comb, which is perhaps easiest done by running the blade of a pocket-knife through and turning it. The full width of the hive-entrance is to be left open. A small colony can be wintered in this manner with almost the same safety as a large one, provided we give them, between two division-boards, as many combs only as they can cover, and fill the spaces between the division-boards and the sides of the hive with soft hay or its equivalent. If combs of honey were placed on the outside of division-boards, instead of hay, with blocks in front, they would become mouldy and affect the colony, while without the blocks the abode would be too cold in a severe winter. The second-story is placed over the brood-chamber, and roof on top as usual.

Bees prepared in the above manner will winter every time; and when opened on a nice day in March you will find their combs entirely free from mould, and brood-rearing hardly commenced, unless there has been very warm weather. Now move the heaviest combs nearest the cluster, put a division-board on each side, and contract the entrance. Division-boards used in spring should not touch the bottom by about three-eighths of an inch, that bees may go around and help themselves to honey placed on the other side. Bees can better control the temperature of their hive when in close quarters, and nothing is a better stimulant for brood-rearing than division-boards properly used. I put division-boards in and entrance-blocks on at a time when, in my estimation, cold weather is over. It is generally best that bees be kept from rearing brood too early, for a late frost may compel them to contract their cluster and thus expose their brood to being chilled, which sets them back, sometimes, for a whole season. A colony should have between the division-boards no more combs than the bees can well cover. When breeding goes on lively they should be looked after every 10 or 12 days, and a new comb inserted if the additional number of young bees hatched justifies it. Some experience is necessary to do this properly, and I should advise beginners to be rather too slow than too fast, as a great deal of mischief is done by a premature spreading of brood. All spreading is an evil unless the bees can cover their brood well during a cold night.

In a country like ours where white clover is the only source, we should prevent all early swarming; but in due time equalize our colonies. As some colonies will always be found stronger than others, combs with hatching brood and adhering bees from strong colonies should be exchanged for empty combs of weak colonies; but this should not be done until our spring colonies are very strong, almost ready for swarming.

As our honey harvest begins at the latter part of May, or beginning of June, all the colonies shoud be ready for the emergency by that time, and every one of the combs in the brood-chambers should be filled with brood before the honey-chamber or second-story is put on. Some little items should here be mentioned which may be unknown to many. In no case will bees from a hive with a virgin queen be accepted by a colony which has a laying queen. The last one of the former will be killed before the fight ends. Nor should a comb with adhering bees from a strong colony be added to a colony having a virgin queen, for she is sure to be killed. One had best wait until the young queen is laying, when combs may be added with impunity. The only precaution to observe is that the queen be not on that side of the comb against which the new comb is placed, as a too sudden contact with the new bees might endanger her life. Do not let combs mostly filled with honey remain in the brood-chambers during the honey season, but exchange them for empty combs and place them where the little brood they contain does the most good. A large brood-chamber is synonymous with a large number of workers, without which no large crop of honey is possible; while from a small brood-chamber we realize a large number of swarms and a smaller crop of honey. The combs of the brood-chamber should, therefore, not be crowded with honey. When there is honey in the blossoms there is nothing more inducive to coax bees into the second story than to have the brood-frames full of brood. Many people have no idea what a tendency it has to prevent swarming.

In ten frames of the brood-chamber there is a hatching capacity for about 60,000 young bees. Between 2,000 and 4,000 young bees are hatching daily during the season, and the queen being busy refilling with eggs the vacant cells, never causes the swarming impulse; nor do the bees, provided there are enough empty cells for them to store honey in.

A friend stood by on June 27, 1885, when I was overhauling a strong colony of bees, which had the upper story full of honey and which would have swarmed the same day if the weather had been favorable. I broke out five queen-cells, two of which contained mature young queens which I at once introduced to newly made colonies. The queen having an aged appearance, was left in the hive, though it was full of brood and an apparently mature queen-cell; ten empty combs were placed in the second story. My friend thought that I had a chance for a swarm in a day or two; I replied that such was possible, but that it was more likely that the young queen would hatch and lay eggs at the same time with her mother until the latter should disappear. Three days afterwards the young queen was quietly crawling about the combs without any signs of a swarm. Honey comes in lively from a large patch of wild mustard and linden trees about a mile off, while white clover is an entire failure.

To keep the brood-chamber full of brood, and the honey-combs above it emptied promptly when filled, or exchanged for empty ones when they became heavy, is the best means I know of to prevent swarming and to realize a full crop of honey.

When comb honey is the object, the same precautions have to be observed in regard to the brood-chamber; every comb must be full of brood. Sections may be filled with thin-bottomed foundation to within a ¼ of an inch above the bottom. Full sections should be removed as they are finished, and replaced by new ones duly primed; or when a set of sections are almost finished, they should be raised and a new set placed under them. For one-pound sections I prefer a section-box, covering the whole brood-chamber. For two-pound sections, being larger, I prefer a section-box in three separate parts, or three section-boxes covering the whole brood-chamber. Bees, needing a certain amount of heat for comb-building, etc., form themselves into clusters for this purpose, and thrive best the less empty space is given them inside of their hives. It is therefore best to put on only one section-box at a time and to add another when the previous one is nearly filled, and so on; section-boxes almost filled should be raised and new ones placed underneath, when no interruption of comb-building or storing honey will be apparent.

EXTRACTING FROM BROOD-COMBS.

It is the greatest folly to extract honey from combs containing brood. A close examination will show every time that even brood in capped cells is injured. If you are ever so careful you will find larvæ floating on top of the honey; and while a mere dislocation in the cells may not kill the larvæ it cannot be beneficial, and we often find them removed by the bees on the following day. The larger the number of our working bees during the honey season, the larger our honey crop; it pays, therefore, to take care of the brood before and during the honey season. The honey being secured we can afford to let the brood hatch before the comb is extracted. I have seen good bee-keepers—so-called—extract every comb of the brood-chamber even for an inch or two of honey stored under the top boxes; and I know of one case where an apiary of some 70 colonies was almost ruined by such foolish proceedings. A rainy spell of two weeks set in just after extracting was over, when most of his colonies were starved out, and those remaining were minus all uncapped brood. After every extracting there should be enough honey left in the hive to prepare for a rainy or cold spell. I admit that feeding is necessary in some cases, but I consider those who do the most feeding none of our best bee-keepers. What benefit does any one derive by reporting 100 pounds of honey or more per colony when he is obliged to feed 40 or 50 pounds of sugar to run his bees through the winter and up to the time honey is coming in the following spring? I do not want to feed whenever it can be avoided, because my time is worth something and sugar costs money. But I always take care to have a number of full combs on hand to supply a needy colony.

We know that by their natural instinct bees store honey above their brood most readily. As profit or the production of honey is our object, we use shallow brood-frames, frames just deep enough to warrant a safe wintering, *i. e.*, Langstroth frames. We have the honey-chamber commence just where the brood-chamber ends. Allowing under the top box of the brood-frames about an inch for honey, we have in a two-story frame-hive a breeding capacity for about 60,000 bees, which is synonymous with at least that number of a worker force, consequently, a large crop of honey, and not many swarms, but large swarms if any. Towards the close of the honey season the extent of the brood diminishes and honey takes its place, growing gradually but steadily in extent. The combs next to the sides of the hives become filled first; as brood hatches the cells are being filled with honey, and bees and queen concentrate towards the center of the brood-chamber, where, at the approach of winter, we find the emptiest combs and the last brood of the season. Such will be the state of affairs if extracting has not been too close and the season has been an average one, and the precaution has been taken, at about the close of the season, to confine the colony to the brood-chamber, and no feeding will be necessary. If, however, the extracting has been done too close, during the honey season, even if our fall yield is not below an average one, the bees will generally be unable to find the necessary supply for winter. When everything is in our favor, precautions are unnecessary, as a matter of course, but to provide against reverses, shows the standard of the bee-keeper.

A number of bee-keepers argue in favor of eight-frame hives, and even smaller ones, claiming that they get more honey above eight, seven, six, or even five frames. They are correct to a certain extent. The queen occupies every cell in the brood-chamber and keeps doing so until the season is past, and every drop of honey coming in can only be stored in the honey-chamber. The queen having a certain number of eggs to lay, is unrestrained at first and keeps the brood chamber filled with eggs up to the last. No gradual decrease in breeding takes place, and when winter approaches the combs of those colonies are empty, and the bees would die of starvation if not supplied with their winter stores. This takes away our profit, unless our time is worth nothing, and sugar considerably below its present market value.

Another fact needs mentioning in connection with wintering: It has been repeated over and over again that one or another wintering his bees successfully for years, while he lost all he had another season, wintering them in the same cellar and having prepared them in the same manner. Others again, wintered their bees successfully in double-walled or in chaff hives, while all they had were lost another winter. As stated above, successful wintering can be accomplished in a number of different ways. I have tested the matter to my satisfaction, that, in our climate, it requires neither cellar, nor chaff hive. With plenty of food within easy reach of their cluster, and a dry air in their hives, bees can withstand a greater amount of cold than most of us imagine. My bees have been in well-made chaff hives, in double-walled, and in single-walled hives for at least 20 years, and in no spring have I been able to say that they wintered better in the one kind of hive than the other; but I am positive in stating that my strongest colonies in spring were never is chaff hives. Single-walled hives are handiest for many reasons, and have proved to me the most desirable of any, although during the winters the mercury has for weeks ranged in the twenties below zero.

Cincinnati, 9O,

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

For the American Bee Journal.

Some Troubled Bee-Lore.

C. W. DAYTON, (116).

As Mr. Barber predicted, many bee-keepers are "holding up their hands in horror" at wintering bees in a temperature of 60° to 90°; and Mr. Barber brands them "unmanly and unjust" in doing so. I winter my bees so that I can watch the motions of the bees, and the degree of hibernation. Usually the bees appear entirely motionless, and continue so for months at a time. In a few instances the temperature was raised to 62° or 65°, and the bees remained as motionless as before; but there was an increase of the roaring. At other times a slight raise in the temperature from 45° set every cluster in the cellar in motion.

What puzzles me the most is, how Mr. Barber can maintain a temperature of even 60° for one-fourth of the time. After trying frost-proof cellars that were as air-tight as stone and mortar could make them, and filled with almost a colony of bees to the cubic foot, I find them unable to maintain a temperature as high as 50°. I have kept thermometers standing in the clusters of colonies nearly all winter, and it varied, when the bees quiesced, never above 72°, and sometimes below 60°. As the temperature of the earth at cellar-depth is about 45°, and as cold is much the stronger element, it is plain that a temperature maintained by quiescing bees would not be very high; even if the cellar was one solid cluster of bees it might fall below 65°.

Other tests were made with thermometers where the temperature ranged from 75° to 87°, but the bees were in an unsettled condition, and bees cannot pass the winter in a state of activity. I believe that Mr. Barber only claims that the temperature was 60° when the colonies were put in, and 90° when they were put out, with no record of temperature between times; until of late, since he practices wintering in a temperature of 45° to 50°.

On page 293, Mr. W. F. Clarke states what was said at the Detroit convention, and amplifies with what appears to me some pretty well deformed ideas. Note the following: Mr. Hall's honey crop averaged 250 pounds of comb honey per colony; and Mr. Clarke thinks that Mr. Hall can go to other localities and do equally as well. On May 20 Mr. Hall's colonies averaged about 6 or 7 combs of brood, and the honey-yield ends about July 20. On page 212 of the BEE JOURNAL for 1883 Mr. Fayette Lee says that he wants 9 combs of brood in every hive by May 25, and the manner in which it is said conveys the idea that he is able to get them. Mr. Lee's honey yield ends about July 25, and his average is less than 100 pounds per colony of extracted honey. I have always failed to get more than 7½ combs of brood in every hive by May 25, but there was an average of 6 or 7 combs of brood in my hives by May 20 this year. Now a query is this: Does Mr. Hall have his hives overflowing with bees, and yet not containing but 6 or 7 combs of brood? I think not. From this it may be seen that our stock of bees on May 20 is equal to Mr. Hall's, and his good management or excellent location for honey is the secret of his success. Mr. Clarke attributes the success to wintering in a high temperature.

In my experience it would be impossible to store enough bees in a cellar to maintain a temperature of 60° if they were at all quiescent; and if they do not need to quiesce, then the hibernation theory goes immediately down. Not long ago a bee-keeper told me that it would be an easy matter to maintain that temperature in his cellar, as potatoes had sprouted and grown. He had not tested with a thermometer. Now I find that where potatoes are kept in a steady temperature of 50° they will not grow; but they may be kept in a temperature of 40°, and taken into a high temperature for 48 hours, they may be returned to the low temperature and they will immediately sprout and grow.

From an experience in building up a large number of colonies in the spring, it has become my belief that the strength of a colony cannot be reasonably increased in a temperature no higher than 60°, as the labor in caring for brood wears out bees as fast as new ones can be reared. Even with strong colonies it is hard to make much progress before the arrival of May and June weather, or a time when one bee is enabled to care for several cells of brood.

Reports that colonies reared brood and came out more populous in the spring than they were in the fall, in my opinion, is "four-thirds" mistake; and placing the colony in the cellar on a cold day with a contracted cluster, and putting it out on a warm day would make such a mistake possible. Experience has taught many, also, that the amount of brood a colony has when it is taken from the cellar, is a very incorrect measure of the career of the colony in the future length of time which may not exceed 60 days.

Bradford, 6 Iowa.

"**Don't Stop**"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "It is not convenient for me to send the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

Our Catalogue of Bee-Keepers' Supplies will be sent to any one desiring to get a copy. Send name and address, plainly written, on a Postal Card for it.

Local Convention Directory.

1886. *Time and place of Meeting.*

July 16.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bees Destroying Queen-Cells.—G. H. M., Burr Oak, ♀ Mich., on June 25, 1886, writes:

I had a colony that I divided on June 4, and it did very well until it swarmed, when it had 7 queen-cells; as fast as these hatched, the bees destroyed them. I made an examination to see if they had a queen, but found none. I then went to a hive that had cast a swarm and cut out 4 queen-cells and put them in the former hive, but they were destroyed. I made another examination, but found no queen. What shall I do with them?

[You do not say which part of the divided colony it was that swarmed. You say, "as fast as the cells hatched, the bees destroyed them." Do you mean the cells, or the queens? You "made an examination;" did you look for queen or eggs? You say you introduced more cells, and they were destroyed. Was there not a virgin queen in the hive at the time? Look for eggs and brood, and if you find none, put in a frame of eggs and larvæ, and 3 days after introduce a fertile queen or a queen-cell.—James Heddon.]

Bees Working Well.—Abe Hoke, Union City, ⊸ Ind., on June 28, 1886, says:

Bees have worked well and gathered lots of honey when the weather was warm enough. I have one colony on scales, and on Saturday, June 26, it gained 7 pounds in weight. On Sunday, June 27, it was cold all the forenoon; the afternoon was warmer, but the colony lost 1½ pounds in weight. There is an abundance of bloom, and if the weather should get warm soon we will have a pretty good crop of honey. So far I have had only seven prime swarms, and no after-swarms. One came out, but I put it back, and cut out all queen-cells but one for the colony.

Honey-Dew.—J. J. Waller, Pleasure Ridge Park, ♂ Ky., writes as follows on June 23, 1886:

I herewith enclose a few leaves from a grove of black walnut, which grows on my place, and ask that you have them examined and report the result through the American Bee Journal. These leaves, as well as all in the grove, have their upper sides covered with a sweet substance very much like dew in appearance. Upon the under side there are a great many very small, pale-green insects. I do not find any on the upper part of the leaf. I examined a hickory tree which is so situated that a part of the leaves are under or near the walnuts, and the rest some distance off. Those near the walnuts are covered with this sweet, while those at a distance have none. I believe this sweet is produced by the insect, but there is one difficulty in the way, and that is, that in order to reach all parts of the trees the substance must be ejected with considerable force, and I cannot see why the under side of the leaf would not contain it as well as the upper. I have 64 colonies of bees, and they are very busy gathering in this "honey-dew." It has been about three days since it first made its appearance. Some ten years ago, about this time of the year, and during weather very much like the present, this same kind of thing appeared on the leaves of this grove, and the bees gathered it in great abundance, but it was so dark and disagreeable in taste that it was almost useless. Perhaps I may report further when I see the outcome of this, to me, strange and unnatural affair.

[The insects are aphides, too crushed to be identified. They are probably *Aphis punctatilla*. They work on the under side of leaves, and, as in all such cases, the nectar falls upon the upper surface of the under-hanging foliage. As suggested by Mr. W., they often eject the nectar with some considerable force. The plant-lice were never more common and widely distributed than this season. I presume the dry season is very favorable to this growth and development. Usually this nectar does no harm to trees; last year seemed an exception in the case of blackberry plant-lice in Northern Michigan.—A. J. Cook.]

Report from Mississippi.—L. J. de Sobotker, Riverton, ⊸ Miss., on June 26, 1886, writes:

We have had some very changeable weather, being warm, sultry, chilly and rainy for the last ten days. There has been a check upon the supply of nectar, and the bees have been very much inclined to robbing. I have been extracting right along, except the last week in May and the first in June, but I had to do so with the hive-entrances reduced to a one-inch passage, and heavy smoking in opening the hives. The bees cluster out heavily around the hives, and it is with some difficulty after a day or two that they go to work again. The hives are well ventilated. In bloom we have plenty of alders and white clover yet, some bell-flower-shaped vines in the woods, and plenty of very small shrubs with yellow bloom, something like the asters, but the bees bring only pollen from these. There is plenty of honey in the hives, but I have been sick for two weeks, and had no help in extracting. I have now 100 good colonies, 16 nuclei, and 26 colonies in box-hives.

Questions.—H. Weidman, Riverside, ⊙ N. J., writes thus on June 24, 1886:

I would respectfully submit the following questions to be answered in the Bee Journal: 1. Will the size and shape of the brood-frames have any bearing on the future successful wintering of our bees? 2. It being well known that bees in building comb always build the straight rows of cells horizontally, and the foundation being made the same way, would it not be an advantage to have the rows of cells run vertically instead of horizontally in the foundation? Would this prevent the bees from slanting the cells along the top-bar of the frames? Would it make the comb stronger or weaker? Would it retard the work of the bees any, or not, in drawing out the foundation? Would it be possible to make bees build comb in this way without the use of foundation?

[1. After experimenting and observing for 18 years, I am confident that if the depth of brood-frames has aught to do with successful wintering of bees, its influence is so slight that it is utterly obscured by other and far more potent influences. I prefer long frames to short ones, whatever their depth may be, because I believe that fewer and longer ranges of comb give the cluster better access to their stores during long cold spells in winter. This, however, is by no means a vital factor, and I advise constructing hives for the convenience of the apiarist.

2. I have used considerable of the Dadant comb foundation, made with cells in rows vertically, in which position many claim the foundation is less liable to stretch and sag. I have never noticed any difference in the despatch or excellence of comb-building and combs. Bees always row the cells horizontally, if not guided, but I think they gain nothing by following that instinct. I have noticed no difference in the slant of the cells,

though I have not observed that point carefully. I do not think it possible to induce the bees to build cells in vertical rows without the use of cells of full length.—JAMES HEDDON.]

Bees Bringing in Basswood Honey.—Joshua Bull, Seymour, o+Wis., on July 8, 1886, writes:

My bees have done fairly well thus far. When white clover should have been at its best, it was so hot and dry that it could not yield much nectar; then came a rainy week, and by the time the weather got settled again, the best of the bloom was gone. I think the bees are bringing in basswood honey to-day, and the prospects are good for an excellent harvest, if the weather should continue favorable for the ingathering thereof. We have had some extremely hot weather; on the 6th inst. the mercury was up to 98° in the coolest shade that could be found. The heat was very oppressive, thrifty growing plants wilted beneath the scorching rays of the sun, and bees spread over the outside of their hives.

Prolific Bees, Lots of Honey, etc.—J. M. Hambaugh, Spring,+o Ills., on June 29, 1886, writes:

This has been one of the most wonderful years in the history of the country, for increase of bees. Everybody's bees are swarming, swarming, swarming, until old nail-kegs, boxes, etc., have been resorted to, and many have absconded to the woods, and the consequence is, the woods are full. I have managed to hold my own level—in about 125 colonies I have had 15 swarms, and extracted nearly 3,000 pounds of honey, and 1,500 pounds more waiting. Forty-nine colonies produced 1,065 in 6 days, and partially sealed the same. Cool weather has checked the flow at the present.

More Misrepresentations about Honey.—E. M. Hayhurst, Kansas City,+o Mo., writes thus:

On page 420 of the "Home Hand-Book of Domestic Hygiene, by J. H. Kellogg, M. D., of Battle Creek, Mich.," I find the following unqualified statements, under the head of "Adulterated and Artificial Honey:"

"A large share of the strained honey in market is adulterated with glucose, as well as are syrups. In some cases so-called honey contains not a particle of the genuine article, being simply a flavored syrup of glucose. We have examined specimens in which considerable quantities of sulphuric acid were present. * * * It is stated that another very ingenious form of adulteration of honey has been quite extensively practiced. What is termed the foundation of the comb is made of paraffine, a wax-like substance made from petroleum. This saves the bees much labor, as they have but to build up the cells on the foundation furnished them. Then to still further economize their time and labor, they are abundantly supplied with glucose in solution, which they have but to transfer to the comb, thus avoiding the trouble of gathering sweets from distant fields. * * * This certainly caps the climax of adulterations."

Dr. Kellogg, the writer of the above, is also Physician-in-Chief of the Sanitarium, at Battle Creek, Mich., and editor of their periodical, *Good Health.* The copy from which the extract is made, is of the 13th thousand, 1885. Dr. Kellogg's publications have a wide-spread influence, and the foregoing statements, which are misleading and *practically* false, are calculated to do great damage to the interests of bee-keepers—an industrious and honorable class of people.

[As General Manager of the Nation-Bee-Keepers' Union, we have sent the above to Mr. Kellogg, with the following letter:

OFFICE OF THE NATIONAL BEE-KEEPERS' UNION, CHICAGO, ILL.,

DR. J. H. KELLOGG: *Dear Sir.*—By the enclosed "proof" of an article for the AMERICAN BEE JOURNAL, you will see that we have a "bone to pick" with you. You have simply repeated the falsehoods of Prof. Wiley, who has admitted that he wrote them as "scientific pleasantries," never thinking that any intelligent person would imagine them to be facts!!

Your assertion about paraffine comb being filled with glucose is a little improvement upon Prof. Wiley's; he had it made "complete comb, filled with glucose and capped by machinery." You assert that it is simply comb foundation, built out by the bees and by them filled with glucose, etc.

You should be well aware that bees *will not take glucose* when honey is to be obtained, and only when starving to death will they touch it.

You ought to know that the comb foundation almost universally used by bee-keepers is to aid the bees by giving them wax sheets just when needed to receive the pure honey when it is found in the flowers, or else to aid the queen to keep up the strength of the colony, by giving her cells to lay in at the proper time—and is made of *pure beeswax.* If any adulteration of it can be found it does not amount to one pound to a thousand pounds of the pure. Your statement is therefore not true, and o great damage to an honest industry. I hope you will at once retract it, and by all proper means counteract its evil influence.

Yours, etc.
THOMAS G. NEWMAN,
General Manager.

[We are surprised that Dr. Kellogg should make such assertions—without the slightest shadow of proof. If he is honest, however, he will be glad to make due amends.—ED.]

Dry Weather.—P. Sunday, Goodells, o+Mich,, on July 5, 1886, says:

The honey season has been good up to the present time, but it is getting very dry here and if we do not get rain soon our honey-flow will be cut short. Basswood is just commencing to blossom, but I do not think we will get much honey from it on account of the dry weather.

Bees in a College Building.—D. R. Rosebrough, Casey,o+ Ills., writes:

In a village in this county is a college building that was built 25 years ago. It is a large, two-story brick, and has old-fashioned cornice. Several years ago some bees took possession of it, and now they are working in it at five different parts of the cornice. I should like to know whether they swarm, or do they move around the building from the one colony. The cornice is some 2 feet high.

[I have had no experience nor opportunity for observation in this line, but from what I know of the instincts and habits of bees, and from what I have been told by persons that had no object in deceiving, I conclude that bees in these large cavities do divide, becoming separate colonies, each with its own queen, and sometimes pass out and in through a common entrance, as they are seen coming from ledges of rocks along some of our American rivers. If the five different places of ingress and egress are quite a distance apart, and a good working force passes each, I should conclude that there was more than one colony and one queen in the cornice.—JAMES HEDDON.]

Bee-Keeping in Virginia.—J. Few Brown, Winchester,ð Va., on July 2, 1886, says:

The bees in this section came through the winter stronger than for a number of years. Our honey season is nearly over; hail, rains and cool nights have curtailed the surplus yield considerably. We have had more swarms than for five years.

Good Indications.—John Moller, Sr., Fremont,o+ Neb., on July 1, 1886, says:

I commenced in the spring with 60 colonies, and increased them by natural swarming to 120 colonies. The prairies are covered with a profusion of bloom; the weather is sultry and hot. The bees are storing fast; every indication of a good honey season.

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. 1, bound in cloth, $2.50, postpaid.

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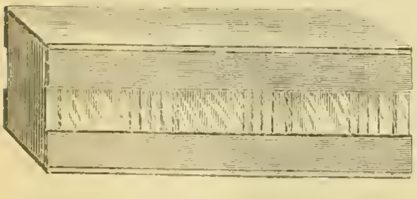
Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1½c. per light, extra.



◆

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00. Orders filled **at once.**

◆

Special Sizes of Sections cause much confusion; and if such luxuries are indulged in they should be ordered long before the "rush" comes, in May and June. Special sizes cost more, and when ordered during the "rush," create considerable dissatisfaction by the consequent delay in getting them made. We have a lot of special sized two-pound sections 5¼ inches high and 6 inches wide, narrow tops, and square groove, which we can ship instantly at $3.50 per 1,000. They are 7 to the foot.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

☞ Our stock of Simmins' pamphlet on Swarming is exhausted, with several orders unfilled. We have more on the way, and as soon as they come all orders on hand will be filled.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and a Voting Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Voting Blank.

◆

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

◆

Job Lot of 2-lb. Sections, Cheap.—See our offer of a job lot at $3.50 per 1,000, on page 448. If you can use this size of section, there is a bargain for you. They can be shipped the same day the order is received.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 12, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—The new crop of honey is coming forward quite freely, and looks well; demand is light, however, at 14 to 15c. Extracted, 5 to 7c. per lb.

BEESWAX.—Scarce at 25c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—New honey is coming forward freely. The quality is exceptionally fine and the crop will be large. White to extra white comb, 9@11c. Extracted, 4@4½c. for white; 3½@3¾c. for amber.

BEESWAX.—22@23c.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—There is a little new honey in the market, and is selling at 13 cts. for white in 1-lb. sections. The demand is limited, however.

BEESWAX.—Firm, at 25 cts. per pound.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—The demand for extracted honey has been very light of late, but it seems to be improving gradually for manufacturing purposes. There is considerable honey in the hands of commission merchants, and prices are very low—3½ to 7 cts. per pound is the range of prices. Prices of comb honey are nominal.

BEESWAX.—Arrivals are good and the demand fair. We pay 18@22c. for fair to choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Our new crop is arriving freely and is very fine. Sales are slow and prices low. One-lbs., white clover, 14c.; dark 1-lbs., 10 to 11c.; 2-pound white clover, 12c.; dark 2-lbs., 8 to 10c.; California 2-lb., white sage, 10 to 12c.; dark 2-lbs., 8 to 9 cts. Extracted white clover, 5 to 6c.; dark, 3 to 4 cts.; California white sage, 5 to 5½c.; dark, 4 to 4½c.

BEESWAX.—20 to 22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The demand is limited but the supply is very much better in quantity as well as quality. The new crop receipts are very fine. We quote: Choice white in 1-lb. sections, 16@17c.; same in 2-lb. sections, 15@16c.; dark, nominal, 10@15 cts. Extracted, choice white in tin, 7@9c.; same in barrels and kegs, 6@7c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The market is very much depressed. Sales of water white extracted have been made at 3½c. Some of the honey coming forward is in light weight tin so poorly soldered as not to bear handling, occasioning trouble and expense to the receiver and waste and loss to the shipper. White to extra white comb, 8 to 10c. Extracted, white liquid, 3½c.; light amber colored, 3 to 3¼c.

BEESWAX.—20@23c.

SCHACHT & LEMCKE, 122-124 Davis St.

◆

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

Advertisements.

WILL sell 400 full Colonies of Bees in lots to suit buyer; or will sell Apiaries already stocked up. **Now is your time.**
Address, **H. R. BOARDMAN,**
28Atf EA. TOWNSEND, Huron Co., O.

STRONG 3-Frame Nuclei.—I will now sell my 3-frame Nuclei (full-sized frames), with tested Italian Queens, at $5.00 for 2, shipped by Express in one box. Safe arrival guaranteed. Address,
28A1t REV. J. E. KEARNS, Morning Sun, Iowa.

COLONIES of Italian Bees in 10-frame hives at $5.00; Tested Queens at $1.25; Untested Queens at 75 cts.; 2-frame Nucleus (no queen), $1.50; three-frame Nucleus (no queen), $2.00. Address, **OTTO KLEINOW,**
(Opp. Ft. Wayne Gate), DETROIT. MICH.
28Atf

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

---

35 CTS. per lb. for best Brood Foundation made from pure yellow beeswax.
27A2t G. PROCHNOW, Mayville, Wis.

Wanted—Dead Bees.

A Drug Firm who uses Bees in the preparation of medicines wishes to buy a few swarms. They must be killed by Alcohol and Expressed at once. Parties having weak swarms that they wish to dispose of, would do well to write us, quoting price per pound for the dead Bees. Address,
28A1t **LLOYD BROS.,** CINCINNATI, O.

ROOT'S Simplicity and CHAFF HIVES, Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand.
Address, **E. R. NEWCOMB,**
PLEASANT VALLEY, Dutchess Co., N. Y.
27A8t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

A. J. KING'S New CIRCULAR of

CARNIOLAN, SYRIAN and ITALIAN QUEENS sent FREE on application.
A. J. KING, 51 Barclay St., New York.
26E4t

CLICKENGER & HUFFMAN,

DEALERS IN

PURE HONEY, BEE-SUPPLIES, &c.

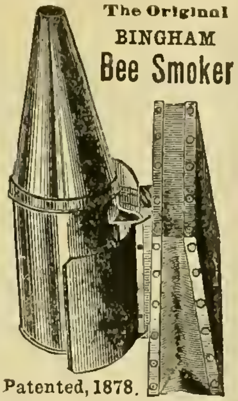
WE would say to the readers of the American Bee Journal that we are making a specialty of handling Pure Comb and Extracted Honey, Wood and Willow Ware, Bee-Supplies, &c., &c. Those looking for a market for Pure White Honey should address, **CLICKENGER & HUFFMAN,**
(Telephone 797), 117 S. 4th St., COLUMBUS, O.
27A3t

Sections and Berry-Baskets.

WE, the *original inventors* of the one-piece Sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
28A4t MILTON, Trimble Co., KY.

I CAN use a few thousand pounds of Extracted Honey of good quality, if cheap. Address,
H. R. BOARDMAN,
28Atf EA. TOWNSEND, Huron co., O.

HONEY-PAILS.—As I will dispose of my honey crop by other methods, I offer my stock of 3-lb, Jones' Pails at **$5.25** per 100. Several hundred of them are labeled, and the first orders will take the labeled ones. **C. W. DAYTON,**
25A2t BRADFORD, IOWA.



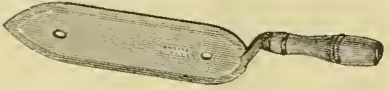
Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am *boss*—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,
BINGHAM & HETHERINGTON,
15Atf **ABRONIA, MICH.**

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL

W. Z. HUTCHINSON,

Is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows: Single Queen, $1.00; 6 Queens for $5.00; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound). Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.

W. Z. HUTCHINSON,
8Etf ROGERSVILLE, Genesee Co., MICH.

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece,	40c per lb. for heavy.
V-Groove, $4 per 1,000	50c " " light.
Less for lots of 10,000	Send for Samples and Price-List.

A. F. STAUFFER & CO.,
15Etf STERLING, ILLS.

DR. FOOTE'S

HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping Bathing, Working, etc.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons Fetid Feet, Freckles, Headache, Hiccough, Hives Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts Whooping Cough, Worms in Children.

Price only **25** Cents. Sent by Mail, post-paid.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

ITALIAN QUEENS, by Return Mail, Tested, 1.00. Untested, **75** cents.
26Atf **GEO. STUCKMAN, Nappanee, Ind.**

PRICES REDUCED.

ON account of scarcity of money, I will sell my **Warranted Queens** at **$8.00** per dozen, or 2 dozen for $15.00.

☞ **I will EXCHANGE Queens for Honey.**

27Atf **J. T. WILSON, Nicholasville, Ky.**

Italian and Carniolan Queens

BY RETURN MAIL.

BRED in separate apiaries away from other bees. Warranted Italian or untested Carniolan Queens, in June, $1.10; 6, $5.90; in July, $1; 6, $5. State which you prefer, **Bellinzona** or **Golden Italians.** For full particulars and prices of Bees, send for Circular. *Satisfaction guaranteed.*

CHAS. D. DUVALL,
24Etf SPENCERVILLE, Mont. Co., MD.

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO ILL.

ITALIAN QUEENS.

I WILL furnish **Warranted Italian Queen-Bees** for $1.00 each; Tested Queens for $2.00 each. Delivered by mail.
PETER BRICKEY, Lawrenceburg, Ky.
18E10t

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and Full Colonies; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.,** a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,
J. P. H. BROWN,
7E10t AUGUSTA, GEORGIA.

ALLEY'S QUEENS.

READY JUNE 1, 1886.

WARRANTED	Queens,	by mail	....	$1 00
"	"	"	per ½ Doz...	5 00
SELECT	"	"	each.........	1 25
"	"	"	per ½ Doz...	7 00
TESTED	"	"	each.........	1 50

By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.

HENRY ALLEY, WENHAM, MASS.
20Atf

ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*

9W1y **J. M. JENKINS, Wetumpka, Ala.**

A Year among the Bees,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25**. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

HUMPHREYS'

HOMEOPATHIC

SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.

DOUBLE-WALLED

Langstroth Hives

FOR WINTERING BEES ON SUMMER STANDS.

THEY are made identical and interchangeable with our Standard Langstroth Hives, as advertised and described in our Catalogue. All upper stories and surplus arrangements made by us will fit this double-walled brood chamber. Prices: Nailed, **50c.**; in the flat, **35c.** per hive, in addition to our prices of the Standard Langstroth. We also make our 7½-inch Caps with a sloping or Cottage Roof, which is worth **20c.** nailed and **15c.** flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

THOS. G. NEWMAN & SON,
923 & 925 West Madison-st., Chicago, Ills.

Lewis' V-Groove One-Piece

SECTIONS.

Down, Down, Goes the Price!

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G.B. LEWIS & CO.,

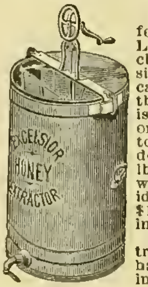
WATERTOWN, WIS.

April 15, 1886. 16Wtf

40 **CENTS per pound, boxed.** VonDorn's Dunham Brood Foundation. **Circular Free.** **T. L. VonDorn**, *Omaha, Neb.* **None Better**
12A16t

EXCELSIOR

HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,		13x13	inches.....	...$8 00
For 2 Langstroth	"	10x18	"	.... 8 00
For 3 "	"	10x18	"	.........10 00
For 4 "	"	10x18	"	.........14 00
For 2 frames of any size,		13x20	"	.........12 00
For 3 "	"	13x20	"	.........12 00
For 4 "	"	13x20	"	.........16 00

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

BEE Hives and Sections—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

TESTED Queens, (Imported Mother), $1.25 each; $12 per doz.—O. N. Baldwin, Clarksville, Mo.
4Aly

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

RIBBON BADGES.

We have some **ELEGANT RIBBON BADGES**, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

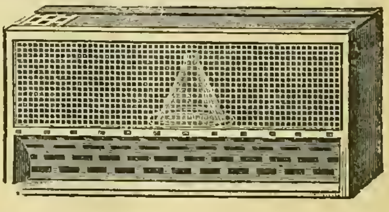
THOS. G. NEWMAN & SON.,
923 & 925 West Madison Street, Chicago, Ill.

BY RETURN MAIL

Select Tested **QUEENS, $1.50 each.**
Warranted Queens, **75c.** Per doz., $8.00.
Strong three-frame Nuclei, with tested Queen, **$2.50 each.**
☞ All Queens strictly pure Italians. ☜

Address, **JAS. F. WOOD,**
20A20t NORTH PRESCOTT, MASS.

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

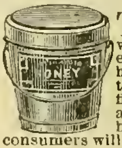
I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

GIVEN AWAY!

SEWING MACHINES.

100,000

Newest and Best.

Black Walnut, Drop Leaf Table, Cover 3 Drawers and Full Set of Attachments, only $14.50, Cash or **FREE** for **29 Subscribers to** ☞ **THE WESTERN WORLD.**

FREE HOMES IN THE **United States.**

How to Get Them. Where to Invest Money or find Employment, told in the most widely-circulated paper published. Price $1.00. Send to **CHICAGO, Ill.,** For Sample Copy of **THE WESTERN WORLD.**

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Foundation Mill.

6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. July 21, 1886. No. 29.

We Have Received a photograph of the apiary of Mr. John H. Thornton, of Lima, Ills. It shows 140 colonies of bees, but he says there are more over the hedge-fence. That is pretty well for a young man of 25 summers—and unmarried, too. He says he has been making bee-keeping his special business for six years, and that the prospect is good for this year's crop to amount to eight or ten thousand pounds. We have put it in our office album.

◆

The Election of officers for the Union resulted in an average majority of over 100 in favor of the officers of last year. All the votes which were not for the re-election of last year's officers were very scattering; no one receiving over a dozen votes, and it would be quite uninteresting to publish the list of names. There were several "blanks," either wholly or in part; the only unanimous vote being that for manager. This must be interpreted as a unanimous vote of confidence in, and indorsement of all his official acts during the past year. He accepts it as such, and while he would have welcomed any good manager as his successor, the unanimity exhibited by the vote nerves him up to continue the battle and "fight it out on that line," cost what it may.

◆

The Austro-German Bee-Keepers' Association meets this year in Troppan, Austria. We acknowledge the receipt of a very pressing invitation to be present, and would be glad to avail ourselves of the opportunity were it possible to do so—but that is out of the question, we are sorry to say. Mr. C. Ernst Mublan, at Troppan, has also very kindly urged us to accept an invitation to make his residence our home during the convention. We should enjoy that very much, and it would be a great pleasure for us to renew the acquaintances made at the meeting of the Austro-German and other European conventions of seven years ago; but we dare not entertain the thought. We feel very sorry to decline, but it must be so, and we bow submissively to circumstances.

The California Fruit-Bees Lawsuit in San Bernardino, has been again decided against the bees. It was taken to the Superior Court on an appeal, and Mr. Bohn writes us that his attorney says that the decision really beats the respondent as well as the appellant, and that it will probably rest there. We have advised Mr. Bohn to make no move unless the fruit-men make such necessary. They expressed considerable surprise that the National Bee-Keepers' Union had a hand in the suit, and we imagine they will not be so anxious to fight the whole fraternity as they were to annoy one member of it. The expenses of the suit and appeal have amounted to $384.50; of this the Union has paid one-half and Mr. Bohn the other half. We shall now let the matter rest, unless the fruit-men make a stir. We have not yet received the judge's decision. When it comes we will publish it.

Mr. Bohn remarks thus concerning some of the advice that has been offered by some of our correspondents:

> As to Mr. Heddon's article, where he speaks of compromise, I think I can stand the test in this case. I have allowed these very fruit-growers to run two large irrigating ditches through different parts of my place, without charging them any damages. As to Mr. Hutchinson's article about bees troubling grapes but for a few days, it is a mistake, as there are two crops to dry. In from ten to twenty days of the first drying, the second comes. The latter dries in from fifteen to thirty days, if they dry at all, which they do not always do. I have known them to be stacked up ten trays high for a week at a time on account of foggy and rainy weather, until they resembled a grape skin full of fermented juice and were thrown away.
>
> So I, recognizing the impossibility of confining my bees to keep them from the fruit, offered to remove my bees if they would buy my place, asking them but one hundred dollars more than I paid for it two years before. They then offered me twenty-five dollars less than my price, at the same time making use of this bluff, that I could not keep bees on the place anyway, when I told them that I thought I could, and that I would keep them there as long as the law allowed me to do so; saying also that if I could not keep them there I could not keep them anywhere lawfully.

◆

Sending Queens to Canada by mail is a matter that may be arranged in the new treaty soon to be made between the United States and Canada. On page 459 the Hon. N. J. Hammond, Congressman from Georgia, promises to aid us in getting the matter straightened out.

The *Canadian Bee Journal*, in its last issue, promises to see that no obstructions are made on the Canadian side. Mr. J. R. Cuthbertson, of the Toronto postoffice, says that he finds nothing to hinder bees from being sent in the mails, when coming from the United States. He also says that the Inspectors of Customs there have not been notified of any restrictions, etc. He has also written to the Canadian Postal Department about it, and has received this reply:

> SIR:—I have to inform you that the Department does not object to the bringing of queen-bees into Canada by mail, provided they are put up in such a way as to guard against their causing any inconvenience or damage in the handling of the mail.

This shows that the trouble comes from the over-officiousness of the officials on this side of the line, which we expect will soon be over-ruled, by the influences already brought to bear on them—the National Bee-Keepers' Union and its friends.

Earthquakes in New Zealand.—On June 9, the natives of Faranza, Auckland, were awakened at 2 a.m. by repeated vivid flashes of lightning, which continued at rapid intervals up to 4 a.m., when a tremendous earthquake occurred, followed quickly by others. The earthquakes continued to follow one another in quick succession up to 7 a.m., when a leaden-colored cloud was observed advancing from the south, spreading out until it covered the sky. While still moving it burst with the sound of thunder, and shortly after showers of fine dust began falling. An exchange says:

> The severity of the shocks led many of the people to believe that the island would sink into the sea. The sensation experienced is said to have been fearful beyond description. Immediately after the first shock the inhabitants rushed frantically in all directions. When the second shock came the entire country for miles around was lit up by the glare from a volcano which had suddenly burst into activity. The scene was as grand as it was awful. Huge volumes of smoke, illuminated with flames, simultaneously burst forth from a range of mountains over sixty miles in length, and above the smoke could be seen huge masses of fire resembling meteors rushing through the sky.
>
> For the first time in tradition the extinct volcano of Ruapeha was awakened into activity. The entire country, over an extent of 120 miles long by 20 in breadth, was nothing but a mass of flame and hot, crumbling soil, which in places rose to the height of 4,000 feet, capped at the highest point by the Tekopha Geyser, said to have been one of the grandest in the world.
>
> Numerous small villages were totally destroyed. Wairoa was covered to a depth of ten feet with dust and ashes. One hundred and seventy persons are known to have lost their lives. The loss of cattle starved to death from the destruction of pastures by the dust is very heavy, and great distress exists throughout all the Auckland Lake district. In most cases where bodies were found they were dead.

◆

Signor Agostino Mona, one of the most extensive queen-breeders of Italy, died at Bellinzona, Tessin, Italy, on May 28, 1886, after a short illness. Signor Mona was a distinguished apiarist, and a noted author. He was a pains-taking student of apicultural science, and a professor of languages—speaking fluently French, German and Italian. Signor Mona was known quite extensively a quarter of a century ago among the apiarists of America, as the breeder of many of the imported queens which were then received on this side of the Atlantic Ocean. What a change—a quarter of a century makes! How many of those who were then prominent in the apicultural world, have passed beyond the stage of action!

◆

"A Mountain of Strength" is what the *Canadian Bee Journal* calls the "National Bee-Keepers' Union." In the last issue of that paper, the editors remark thus:

> That the Bee-Keepers' "Union" is in itself a mountain of strength to the bee-keepers of the United States, is a fact beyond dispute. The postal laws were so construed during the past month that a few bees were not permitted to go with the queen by mail, and this meant nothing more nor less than that the traffic in "queens by mail" was put an end to. Thanks to the "Union" and the efforts of one or two influential gentlemen outside, the barrier has now been removed, and the necessary attendants allowed transmission along with the queen.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Ants and Shading Hives.

Query, No. 280.—1. What harm do ants in bee-hives? 2. Is there any danger of having too much shade for bees under spreading beech-trees where the sun only reaches the hives very early in the morning and late in the evening?—W. J. A.

1. See answer to Query, No. 279. 2. I think not.—G. L. TINKER.

1. They annoy the bees when the hives are opened. 2. I cannot say, but I think not.—W. Z. HUTCHINSON.

1. None at all, but they bother the apiarist. 2. No, if they have a good flight-passage.—DADANT & SON.

Ants do not injure my bees so far as their prosperity is concerned, but it makes bees cross and disagreeable when annoyed by the presence of ants.—G. W. DEMAREE.

I cannot say that they do unless they consume some honey. I think they act as scavengers. I have kept them away by putting tansy in and around the hives.—H. D. CUTTING.

1. See answer to Query, No. 279. 2. Not during June, July or August, but I would not like it in the spring or fall. I use and prefer a movable shade.—JAMES HEDDON.

1. The small ones do no harm except to annoy the apiarist. One kind of our large black ants will gnaw into the wood of the hive, and if molested they will fasten to the bees' legs so securely that the bees cannot get rid of them. This kind of ant I kill when they are found. 2. Bees thrive better in the sun. Too much shade is a detriment.—G. M. DOOLITTLE.

1. Ants have been plentiful in my apiary at times, but have never harmed strong colonies, as I could see. 2. I prefer a board for shade, but I do not think that trees will do any harm in the heated season. In winter they will probably do no harm as the bare limbs will not shade the hive to any extent.—J. E. POND, JR.

1. Usually they do little or no harm. In the South, however, they are said to worry bees, and sometimes even to kill the queen. I keep them away as given in Query, No. 279. By using poisoned syrup in a vessel so made that ants can enter it, but not bees, the ants are easily killed. 2. I believe that shade-boards are better. Such shade as mentioned makes it too damp.—A. J. COOK.

1. They crawl over one's hands and bite when opening the hive; they also bite the bees. At other times they seem to do no harm. 2. I have had hives become moldy from too much shade. The hives may be kept so cool that more bees must stay at home to keep up the heat of the hive than if the sun shone on the hives longer.—C. C. MILLER.

Getting Rid of Laying Workers.

Query, No. 281.—What is the best way to get rid of a laying worker when it once becomes established in a hive?—L. J. M.

Introduce a good fertile queen by caging her 48 hours.—A. J. COOK.

Break the colony up and establish a new one, is the quickest and cheapest in the end.—G. M. DOOLITTLE.

Give a comb or two of brood and the adhering bees, and introduce a queen.—W. Z. HUTCHINSON.

Put in a small swarm, queen and all, or introduce a cheap queen.—DADANT & SON.

This is quite a long story; two efficient methods are given in my book, "Success in Bee-Culture."—JAMES HEDDON.

Keep the bees supplied with all the brood they can cover till they rear a queen; or unite them with a colony having a good queen.—C. C. MILLER.

Take the frames a few rods away, shake off all the bees, and give them empty combs with one of young brood in all stages if possible; or better still, give them a queen or a queen-cell ready to open.—H. D. CUTTING.

Remove the combs with bees adhering to your comb-box, and supply their place with two or more frames of hatching brood with accompanying bees. Now carry the combs in the comb-box a few rods away, and shake the bees down on the ground and let them shift for themselves. I have never seen this plan fail. They will now accept a cell or queen as readily as any other colony or nucleus.—G. W. DEMAREE.

If desirable to save the colony I should change places with a strong colony and give a fertile queen. Where but few bees are left, I should take away the combs if it was not convenient to unite them with two or more nuclei. This latter plan never fails, but the queen must be introduced in the usual way by caging.—G. L. TINKER.

I have had experience with only one laying worker, and I got rid of that one by introducing a queen to the colony. Probably the best way is to break the colony up, giving a frame of comb and adhering bees, each to as many colonies as there are frames.—J. E. POND, JR.

Queens Mating in the Hives.

Query, No. 282.—Will queens leave the hive with swarms before they are fertilized? 2. If their wings are clipped at the time of swarming, will they mate in the hive?—T. A.

1. Yes. 2. No.—JAMES HEDDON.

1. Yes.—H. D. CUTTING.

1. Yes. 2. No.—G. L. TINKER.

1. Yes. 2. No.—G. M. DOOLITTLE.

1. Yes. 2. I think not.—W. Z. HUTCHINSON.

1. Yes. 2. No.—DADANT & SON.

1. Yes. 2. Not generally.—A. J. COOK.

1. Yes. 2. No.—C. C. MILLER.

1. Yes, all after-swarms have virgin queens. If you clip their wings before they are mated they will never mate in the natural way. They never mate in the hive—never.—G. W. DEMAREE.

The fecundated queen leaves with the prime swarm; a second swarm always has an unfecundated queen. If the so-called second-swarm does not issue till its queen has mated with a drone, that swarm is a prime swarm, although the second one out of the same hive.—J. E. POND, JR.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50**. Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. **It will pay** any one to devote a few hours, to get subscribers.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○+ east; +○ west; and this ♂ northeast; `○ northwest: ○` southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Extra Colonies or Manipulation, Which ?

G. M. DOOLITTLE.

Not long ago a friend from the eastern part of this State wrote me that he was going to keep more bees than he had formerly kept, and do less work with them, for he believed that double the number of colonies would give him fully as much if not more honey than he had been getting, even if he did not manipulate them at all. He said that he believed that the system of management which I recommended caused a greater amount of extra labor and manipulation than there was any use of, and henceforth he should adopt exactly the reverse of what I gave in the bee-papers, and put more bees into his field, so that he would get the same amount of surplus as before, with very little labor. All that would be required would be the investing of a little more capital in the shape of hives, etc. ; that I was falling behind the times, and soon would be, if I was not already, the only one who would work on the plan he had previously used.

I have not quoted his words, but I have given the substance of his letter. As this came from a friend who was well meaning toward me, it behooved me to consider the matter a little, and if I were on the wrong track to get right. After carefully looking the matter over I believe that there is one item regarding these extra colonies which the advocates of it forget, that is great enough to more than pay for the manipulation, so that the investing of capital in more hives for the extra number is worse than thrown away. The item I allude to is that each of the extra colonies put in a field in order to secure the honey-secretion from a given area with but little or no manipulation, costs at least 60 pounds of honey each year to support. The question is, which is the cheaper, a little extra manipulation, or the extra colonies, hives, etc., and the honey that they consume ?

Suppose that 100 colonies produce an average yield of 50 pounds each, and by so doing secure all the nectar in a field, year by year. This will make 5,000 pounds of surplus as our share of the field, while each of the 100 colonies will use 60 pounds, or 6,000 pounds as a whole, as their share to carry them through the year. Thus we fail to get one-half of the honey from our field, by employing an extra number of colonies.

On the other hand, if we employ the "manipulation" or economy plan, which our English friends do, of getting the same amount of produce off an acre of land that we Americans do from three or four, we shall find our statement thus : 11,000 pounds is the product of our field ; 50 colonies are all that are needed with good manipulation to get it. Then 50 colonies must use 3,000 pounds of this for their support, leaving 8,000 pounds for the manipulator. It will be seen that the manipulator gets 3,000 pounds of honey for his manipulation, and uses little if any more time than he would use on the 100 without manipulation ; hence from the stand-point of overstocking a field, my system is 3,000 pounds ahead of my friend's plan of keeping an extra number of colonies. The same holds good, be the number kept great or small.

A man can care for one-half the number of colonies on my plan as easily as he can for double the number on my friend's plan, and this same one-half will give the apiarist as good results in dollars and cents as will the whole of my friend's, and save the extra honey consumed by the extra one-half of the number of bees. as clean gain to the bee-keeper. This is not mere fancy, but facts which the success of the two plans prove, as will be obvious to all who have closely watched the reports in our bee-papers for the past ten years.

My friend says that I am the only one, or soon will be, who is working on my plan, and that I am falling behind the times—as if that detracted from it. I care not whether I am behind the times or ahead of them, so long as my plans give me a larger yield of honey for the colonies kept and labor performed, year after year, than do the plans of those who recommend keeping an extra number of colonies with little or no manipulation.

While at a large bee-convention not many years ago, as the proprietor of a large apiary (which numbered nearly 1,000 colonies) was telling of his plans of working, a man sitting by my side kept whispering to me. I chided him and asked him if he was not anxious to hear the plans adopted by so large an apiarist. His reply was, "Why should I care for his plans so long as I succeed in getting on an average each year more honey from my 200 colonies than he does from his thousand. Two hundred colonies properly worked will give more honey to the apiarist than 1,000 will not so worked." I could quote others who I know are working on the same plan that I do, believing that by so doing they can secure the greatest amount of income with the least capital and labor, but that would not necessarily help the plan any.

I ask no one to use any of the plans that I give in the bee-papers, unless he or she chooses, for the matter of being alone has little weight with me. I simply give the plans I use to accomplish given results, and all are free to use them or let them alone, as they see fit ; neither do I give them because I have a supply business back of them that needs bolstering up, for I manufacture no supplies for sale, but I give them to others as part payment for the debt I owe to those who wrote years ago, and to whose writings I owe the success I have had in bee-culture.

My plans are often called expensive, and my hive and fixtures complicated; but I believe there is as little labor and cash outlay by my plan of producing $1,000 worth of comb honey as any plan in existence. As proof, I will say that from less than 50 colonies of bees (spring count) I have cleared over $1,000 each year, for the past 13 years, taken as an average. I have not hired 13 days' labor in that time in the apiary, nor had any apprentices or students to do the work for me, although I have had many applications from those who wished to spend a season with me. Besides my labor with the bees I take care of my garden and a small farm (29 acres) ; have charge of my father's estate ; run my own shop and steam engine, sawing sections, hives, honey-crates, etc., for myself and neighbors ; write for seven different papers, and answer a host of correspondence.

The old saying is, "The proof of the pudding is in the eating," and so I now say, as I have said before in these columns, that all I have to recommend the plans I use, is the success attained by them.

Borodino, ⊙ N. Y.

For the American Bee Journal.

Does Bee-Keeping Pay ? etc.

J. H. ANDRE.

This question is often discussed at conventions and by apicultural papers, and probably no avocation has so much difference in opinions in regard to profit and loss as bee-keeping ; also, if we look into the wide range of circumstances to be taken into consideration in answering this question, we do not wonder at the various opinions in regard to it.

First of all in bee-keeping, is a place for an apiary easily accessible to and fro for the bees, not blocked with trees or buildings. Some may succeed well in such places, but they would succeed far better if the bees were given a free chance. Second, is a place sheltered from high winds ? Third, is there an outlying pasturage? and if possible to the westward, for bees will not thrive as well that have to go eastward for their supply of stores, as nearly all of our heavy showers are from the west, and bees that go eastward do not get warning at all times to reach the hive and are caught in the storm ; and if late in the day and a cold night many die. Add to these a skilled apiarist, and in a good season success is certain.

I quite often hear the expression, "Why, John, your bees do well. You make bee-keeping pay. Well, there is more money in bees for the same amount invested than anything else in the world." O, blissful ignorance! I have tried it and know that if my health would admit I could make more chopping cord-wood, peeling tan-bark, hewing railroad ties, or any branch of farming. And bee-keeping is no easy work either; but there is one thing about it for one in poor health, the work, with the exception of marketing honey, is *all at home;* but to the one who intends to start in bee-keeping to get rid of work, let me say, do not start at all; it is the most weary, watching occupation of any I ever tried. Making maple sugar in the backwoods, and carrying sap by hand, is fun by the side of bee-keeping. Only for experimenting I should have quit before this; as it is, I keep only a few colonies. The poison left in the system by the stings of the bees, I am satisfied sow seed for many diseases, especially of the nerves.

Two years ago a neighbor called on me one evening accompanied by his wife, and said: "My wife wants me to purchase some bees, and has persuaded me to come and see you as to how the business pays. " This man was a blacksmith by trade, and I quickly answered, "It will not pay you." He seemed greatly surprised until I explained that the grim and dirt necessary to his occupation the bees would not like, and his customers would not like to wait for him to attend the bees, either, when they were in a hurry. He concluded that he did not want any bees.

MARKETING HONEY.

One of the greatest curses upon bee-keeping is the holding of honey by some until fall or spring. I went to market with my first lot of honey on June 20, and had hard work to dispose of it on account of so much old honey. Now it might just as well be shoved through as to keep the market full of old honey, and one year's product putting a curse on the next.

Some prefer a few sections in a case well filled with honey, instead of a case full of sections half-filled with comb; I will take the latter every time, two to one, for early honey the next season.

In my article on page 408, third column, and in the ninth and tenth lines, it should read "an easy prey for *worms*," instead of "for swarms."

Lockwood, N. Y.

New York World.

Description of the Carniolan Bees.

FRANK BENTON.

The bees of Carniola are noted for their great gentleness. They only rarely resent manipulation, and need very little smoke to subjugate them. It might be thought that they were lacking in pronounced qualities, but on the other hand, they show decided traits peculiar to themselves and accompanied by distinctive markings, and are therefore as justly entitled as any bees found in Europe to be called an established race.

The typical, select Carniolan queen has a deep copper or bronze-colored abdomen, thorax thickly set with gray fuzz, large, strong wings and a large, stout-looking body. Carniolan queens are larger, on the average, than those of any other race, having especially broad abdomens. Some queens are quite dark, even attaining with age a shining jet color. Such queens, though themselves resembling queens of the common race, do not produce bees in any way inferior to other Carniolan queens. Also pure Carniolan queens are occasionally met with which are as yellow as Italians; yet they invariably produce workers and drones which are distinctively Carniolan.

In all parts of Carniola some queens are found which produce bees having the first segment of the abdomen somewhat rusty-red in color, and they are as often seen among the finest and most prolific queens as among those of any other grade. Nevertheless, variation in color and quality is less with Carniolans in their native land than with Italians in Italy. Yellow workers are not found in Carniola, while black bees—natives, too, are not imported—exist in Italy. The remarkable size and general bronze color of Carniolan queens, in contrast with the grayness of their progeny, make it easy to find them on the combs. They are exceedingly prolific, and herein lies one of the very valuable qualities of this race.

The drones are veritable "gray-coats," and stout, active fellows, having especially large wings.

Carniolan workers are silver-gray in color, large-bodied and strong-winged. The thick fuzz of the abdomen is disposed in light-colored bands, and as dark drab is the ground color of the bee the effect is a decidedly ringed appearance.

The following are the good qualities of the Carniolans: 1. The race is a prolific, well-established one. 2. The workers are gentler than any other bees. 3. They submit more readily than other bees upon the application of a small amount of smoke. 4. They are excellent comb-builders, and their sealed combs are of snowy whiteness. 5. They gather very little propolis. 6. Colonies in a normal condition are vigorous defenders of their hives. The workers are the largest bees of the species *Apis melifica*, and their individual strength is greater than of other honey-bees. 7. Carniolans cluster very compactly and quietly, and winter remarkably well. 8. Queens, workers and drones are more beautiful than those of common bees.

Their faults are, so far as I know: 1. When made queenless they are thrown into great excitement and neglect at first to defend their hives well. 2. They are slightly more disposed to rob during honey-dearths, than are Italians, though far less troublesome in this respect than blacks, or Italians crossed with blacks.

Some might be disposed to bring up as a grave fault the disposition which Carniolans frequently show to cast numerous swarms. I believe this disposition in any race depends almost entirely upon the prolificness of the queens; in fact it is, with all races, greater in proportion as the queens are prolific. Prolificness in queens is the bee-keeper's corner-stone. Swarming is nature's escape for the surplus strength of the colony, and the bee-master has but to direct this force. Whoever cannot do this, is not a master in the art. This, to some, seemingly "bad trait" is preferable, therefore, to one of the most indispensable qualities—prolificness of queens—and is implied and properly included under the seventh point above.

It has been objected by people who claimed to have some knowledge of bee-keeping, and even to know a good deal about foreign races, that "they could not tell Carniolans from common bees." Such persons will find there is still something for them to learn. A number of writers have said that they could not be distinguished from the black bees only by an expert. This is not true of the ones I have seen. There is very nearly as much difference between them and "blacks" as there is between them and the Italians, and we think any child twelve years old would be made to see this as soon as its attention was called to it.

Even if this objection were sustainable it could not be regarded as a very grave fault. Color is quite a secondary matter as compared with qualities, and as regards the latter, I am satisfied the Carniolans are superior to all other European races of bees.

Munich, Germany.

For the American Bee Journal.

Apiculture and Political Economy.

WM. CAMM.

I was both surprised and disappointed in reading the answers to the query about taxing bees, on page 404. I had formed the opinion that bee-keepers, as a class, were above the average in general intelligence and in extracting ideas out of printer's ink; yet here are the "doctors" of the profession answering a question that connects their calling with all others, or with political economy, and answering it in total ignorance of the greatest revolution the world has ever known, in ignorance of the simplest fundamental principles which are fast becoming known and understood by thousands every day here in our own country.

It is hardly surprising that Messrs. Pond and Demaree should answer as they have done; for they belong also to the legal profession which walks backward and judges of everything by precedents and examples of the past. Mr. Heddon's talk about bees being degraded property because they are not taxed everywhere, reminds one of a young wife in one of the Danubian principalities, where it was the custom for husbands to exhibit their affection by beating their wives, and this young woman was crying because her husband did not love her well enough to give her a sound thrashing, though they had been married three weeks.

Here bees are not taxed, and I should "howl" if they were; for the avocation is only in its infancy and has not only many obstacles to overcome, but much prejudice to combat and ignorance to destroy. Where I first commenced bee-keeping, in Missouri, not only bees were not taxed but land planted to fruit was also exempt. So far as custom should guide or govern, the general rule has been not to discourage any new industry by taxing it, and certainly upon this ground alone, bees should be exempt from taxation. But a custom however venerable is not always based upon justice, and Mr. Demaree to the contrary notwithstanding; it is violation of the principles of human rights to tax bees or any other product of human labor; for there are but two things we can tax, and common sense tells us that labor should not be taxed and that land alone should be taxed. I would not give a snap of the finger for all the laws against adulteration, so long as we continue to set at defiance the very principles upon which the prosperity of all human society is based, and we shall continue to do this so long as bees, or anything that is the fruit of human care and industry is taxed anywhere in this broad land.

We have worn threadbare many of the themes which occupy the columns of our bee-periodicals, yet we have hardly touched our calling with a view of finding out its true relations to all others. If I wanted an illustration in disproof of the Malthusian theory, the silly, superficial idea that Heaven puts more human beings in this world than it can support, I should refer to the improvements in apiculture for the last ten years only. Every mouth to be fed, and every back to be clothed, that comes into this world, bring with them two hands and a brain, hence the limit of human intelligence and human endeavor. Look at our vocation for the last decade only, and who is bold enough to state where that limit is? "Well! well!" exclaimed a gruff old farmer the other day as he looked through my honey-room door, "Why, here are thousands of pounds of stuff that makes a man's mouth water to look at, all out of these little blossoms too, where I did not think there was a drop!" "Yes" I replied, "there is more in your land, more in nature's bounty everywhere than we have ever dreamed of in this scramble to live."

One of the things that attracted me to bee-keeping was that I could enjoy my natural rights, and not have my labor forestalled by some one laying claim to that which would have been here if he had never been born, and compelling me to pay for the pasturage of my bees.

"Look here! neighbor," said a large land-owner to me one day, "your bees suck on my white clover, and I have never received anything for it. Why don't you bring me some honey?"

"There are several hundred pounds in my honey-house waiting for you to come and get it," said I.

"Yes, yes, but you'll charge me for that," he replied.

"Only what it is worth to gather it," was my rejoinder.

"You would not have saved one drop of it, for you kept no bees, and you surely do not expect me to work for nothing and board myself because your pasture lies in the way of my bees."

Of course that man was silenced, and perhaps set to thinking; for barring improvements, made by the landlord and used by the tenant, it applied as much to producing corn or wheat on his land as it did to gathering honey. But while I enjoy immunity in this respect from that curse that circles the earth, as the fabled girdle encircled the waist of the mythical Pandora, yet I found it of no real advantage to me unless my customers enjoy their rights in their vocations as I did in mine. In other words, I found myself, after all, "in the same boat" with my fellow-laborers, and with them must either float or sink.

Following the advice so constantly given, I tried to make a home market for my honey. The community was almost a purely agricultural one, and even the towns within reach were supported by the farmers. When I went to a man who was reputed wealthy, he was almost sure to be close-fisted, and nine out of ten were sharp at bargaining, and not over scrupulous, for these were mainly the qualities that had enabled them to distance their fellows in the acquirement of wealth, and they would try to Jew me down without shame. Moreover, in the struggle for money they had contracted habits and tastes that were coarse and cheaply supplied. When I went to laboring men, who were far my best customers, they could not always buy if they would. "It's too high, though I love it." "My wages do not justify me in buying it." "I do wish I could afford it"—were common expressions, and I soon found that I must come down to the level of their wages, and work for as little as others.

Agricultural labor is more poorly paid than any other; and upon it all the mistakes and burdens in other classes are ultimately, yet inevitably, thrown; hence so many are driven into town and city, into trade and trickery; hence so many have to live like the Anglo-Saxon lived under his Norman master, when "bacon" remained Saxon, while "beef" and "mutton" became Norman, and I have an article for sale which they have long learned to do without. Wheat, too, has gone from 80 to 50 cents a bushel; butter is down to 5 and 8 cents a pound, and spring chickens 9 cents a pound; so honey must come down to a bare living on a good season, and less on a bad one.

I may speak reprovingly, but earnestly, and in the friendliest manner to all my brother bee-keepers—we must unite with others in changing conditions that make failures the rule and successes the exception, or the natural advantage we enjoy in obtaining honey will be lost in disposing of it.

Murrayville, Ills.

For the American Bee Journal.

Hive Construction and Manipulation.

JAMES HEDDON.

If I am not mistaken but little has yet been placed before the public in any periodical concerning the merits and methods of using the new double brood-chamber hive. Most of the space given regarding the invention was relative to who owned the results of my labor, and as that is now pretty well settled, and it has been voted to sustain that settlement in the United States courts rather than bee-papers, I have only to deal with the merits and manner of properly constructing and manipulating the hive.

As near as I can estimate, about 200 bee-keepers are now using it to a greater or less extent, but of course no one's experience reaches back of the present season, except that of Mr. Hutchinson, my foremen, my students and myself. As we are now well into our third season's use of the hive, having been brought face to face with nearly or quite all of the advantages and disadvantages connected with its construction and use, and as I am almost daily in receipt of letters asking questions relative to the subject, I presume I am qualified to pen this article, which seems to be demanded, and is quite appropriate.

As the majority are already aware, the central points of invention are, having the brood-chamber divided in two or more parts horizontally, and the use of one-half bee-spaces for the purpose of inverting. A "bee-space" is known among bee-keepers as that space which will not only pass a drone, queen or worker, but in which the workers are less liable to place brace-combs and propolis, and which measures ⅜ of an inch, or that a trifle scant, and these correct spaces are all formed throughout by constructing the brood-cases, surplus-cases and honey-board with a half bee-space (3-16 of an inch) on each side, so that all are invertible, and at all times all bee-spaces are correctly maintained; all of which is fully described in my book.

My object in writing this article was to speak more fully of the *de*merits than merits of the new hive. Like all other hives, it is not without its faults. In the use of it in the apiary I do not know just what to mention as objections. Whatever they may be, they are so small when compared to its superiority over any other hive that I have ever used, that it seems like "straining at a gnat" to attempt to name any. This is, however, by far from being the case, when we are considering the construction of the hive. It costs at least 25 per cent. more than our modified Langstroth, and to successfully carry out its peculiar and most useful functions, the greatest accuracy in workmanship is required.

I am as willing as I am compelled to admit that this is no small objection to its introduction, yet I feel sure that its many other superior qualities will far over-balance this objection, and at the close of this season I look for a proportionately greater number of strong testimonials than any other late apicultural invention has elicited. I am looking for a small number of failures with its use, and I fully believe that every such failure may be credited to imperfect construction. I fear that in some of the hives sent out, notwithstanding our pains-taking, the bee-spaces are too deep, and in some there may have been a shrinkage in the frames, etc. I buy all of the frames, and have found it difficult to get them made as ordered. However, I am rapidly learning how to overcome these mechanical difficulties. My greatest fear is with reference to hives constructed by others.

I have cut all flat material from dry lumber, and at the same time shop-dried our pieces, after which they have been hand-worked to the exact width, and I consider this necessary to the best results. The hive is designed for handling very rapidly and with greatest ease, and to carry this out in practice accurate workmanship is required. Many have ordered one or two hives to "test." While they may, to some extent, test its functions, they will get no test whatever of the ease and speed of manipulation. This hive is altogether different from any other, as regards its management. A bee-keeper who is trained in all the movements required in handling suspended-frame hives, and who is daily handling many of them, will be hardly competent to test the claimed superiority of manipulation of the new hive, by the occasional use of one or two which will ever meet him as something peculiar, and which he is unused to. Two or three bee-keepers have each between one and two hundred of them in use, while others have considerable but lesser numbers, and these gentlemen will be able to tell us something which all will be bound to receive as evidence. Here, we are more and more pleased with the new hive as our experience with it enlarges.

Dowagiac, ♀ Mich.

For the American Bee Journal.

Taxing Colonies of Bees.

E. B. SOUTHWICK.

I notice in the Bee Journal of June 2, some answers to Mr. Blair's question on page 309—"Are bees taxable property?" Mr. Roberts of Iowa has given some quotations but none have any reference to the question asked. That bees are property I do not deny, but that they are absolute property I do most emphatically deny, and I claim that none but absolute property is taxable, without a special law to that effect. For instance: Dogs are taxable when there is a special law to that effect; bees would be taxable under the same rule.

Some time since I tried to show that bees were property and as such for the damage they did, the owner was liable; and now there comes forth a California judge and in his charge sanctions what I had previously stated (see editorial on page 355.) Bees, as I had previously stated are only qualified property. Now the way is to find out if such property is taxable, and that can only be done by inquiring of the ablest and most learned in the law, and not those who have a mere surface knowledge of it. Inquire of one who knows the difference between absolute and qualified property.

Mr. Pond also has an answer to the question. Well, I would not mention it were it not for a hint that he gives, that if the "hue-and-cry" continues we may all have to pay taxes on our bees. Now, if bees are taxable I want them taxed; I want all absolute property taxed. There are many millions of property unjustly exempt from taxation now, a load that the honest taxpayer has to carry. I say let the "hue-and-cry" go on, not only in the bee-papers but in every paper in the Union, and every society, until every kind of absolute property be justly taxed.

Sherman, ⊸Mich.

For the American Bee Journal.

Getting Law for Bee-Keepers.

W. A. PRYAL.

It seems to me that the only way for California bee-keepers to get ahead in lawsuits is for some bee-keeping-horticulturist to have one of his neighbor bee-keepers bring a friendly suit against him in the Superior Court, for say $350, for damages, etc., done by the defendant's bees to the plaintiff's fruit. A suit like this could be easily arranged; the costs would not be much to try it before the court without a jury, and the losing party could appeal it to the Supreme Court, and then its decision would be final, and would be the law of the State, till reversed, or the legislature enacts differently. And, besides, the courts of other States would quote such a decision, and it would have great weight in other cases of a like nature.

The costs of such a suit let us say will be, for filing complaint, $7.50; serving summons (this is a little high, but the bee-keepers may live quite a distance from the Court House, which will make the milage of the sheriff "run up"), $10. This would be all the costs up to the end of the trial, when the stenographer would want his fees for reporting, which are about $10 per day—say 1½ days, $15; entering judgment, $5; $37.50 would be the cost of the suit, not including witnesses at $2 a day, and milage, nor cost for serving subpœnas, as the parties may have some party other than an officer do this much cheaper than an officer is allowed for such service.

By two persons like those named getting together, or, in fact, a number of bee-keepers meeting and selecting two such persons from their number, and have one of them, who is a fruit-raiser or grape-grower, bring action against the other for the cause already stated, the whole lot to "work the racket" for all it is worth, an interesting suit would be the result. Fifty dollars they could raise among themselves. They could easily find two ambitious young lawyers who would be willing to see the suit through for the "glory there is in it." (Let me whisper, California lawyers don't care much for the "glory" a case brings unless something else more substantial comes with it); still, I am sure there are to be found some very smart young attorneys who would gladly tackle such a suit and see it through if the parties were to pay all costs of the suit.

In appealing, the costs come a little higher: To the clerk of the Supreme Court for certifying to papers (this will be hardly necessary as the attorneys will be able to agree that they are correct, and so stipulate), say $3; a couple of affidavits, say $1.50; printing transcript on appeal, at 75 cents a page for pica (this is the Oakland price, though the usual rate is $1), say 50 pages, $37.50; filing transcript with the clerk of Supreme Court, $15; printing briefs for both sides, say 12 pages each, at 75 cents, $18; and other expenses, say $10, making a total of $125.

The costs may run a few dollars above these figures, but I think they may be kept within $100. If the bee-keepers cannot stand the whole of this amount, they may call on the "Union" for the balance.

I would like very much that some bee-keepers would agree to fight this matter out on such a basis, and get the law so arranged that it would be plain sailing thereafter. One thing I would here state is, that it might take some two or three years ere a decision could be had in our highest court, as its calendar is now pretty lengthy. In the Superior Court a decision could be had in the course of a few months. Still, however, I am certain that as our Superior Court has had its machinery augmented this last year, it may in a year exhaust the calendar and be ready to take up a case soon after its being filed.

I see no reason why the course outlined above could not be pursued in some other State just as readily as in this State. Let the readers of the Bee Journal look into the proposition and report. We want as many strong decisions in favor of the bee-keepers' rights as we can possibly get, and if bee-keepers can secure such ones by fair means let them do so, no matter if there are two or three pending in different States at the same time. New York, Massachusetts and California cases would be preferable, with perhaps an Illinois, Indiana or Ohio case thrown in.

Let us have more light on the subject. Speak out, you legal bee-keepers.

North Temescal,+o Calif.

For the American Bee Journal.

Extracting Honey—Some Observations.

C. W. DAYTON.

To-day I worked alone at the apiary in the country extracting honey. The amount taken was 706 pounds, and I also hived 3 swarms of bees.

I was surprised when I examined the record of three of the colonies from which I took honey. The record, dated June 8, says Nos. 6, 11 and 73, each had 8 combs of brood, and were ready for the upper story of combs for extracting. The stories were put on the hives of these colonies on June 9. The queen in No. 6 was confined in a "restrictor" on 6 empty combs at that time. On June 15, No. 6 and No. 73 were capping the honey in the upper story, so another story was added. On June 17 a story containing 6 combs in one end was added to No. 11. On June 22 another story was placed upon No. 6, making it four hives high. To-day the honey in these colonies being nearly all capped, I began to extract, taking 102 pounds from No. 6, leaving 15 pounds in the lower story; No. 73 yielded 78 pounds, with 20 pounds left in the lower story, and two combs from above, while in No. 11 there was about 25 pounds divided about equally in 26 combs, and which I considered too tedious a job to extract, except two combs which were about one-half filled.

Now as to brood: In No. 6 of course there could not be more than 6 combs, but they were entirely filled. No. 73 contained 7 combs of brood, which had a narrow line of honey along the upper edges; and as I use no excluding honey-boards, the queen of No. 11 had 23 of the 26 combs three-fourths full of brood.

The friction comes about in this way: Basswood is just beginning to blossom. I never knew it to last 15 days, much less last 37 days, as it would need to, that a little of that brood might gather honey. When basswood is gone our honey harvest is always ended. The situation is like this: As I do not want increase (if I did it would only make things worse) that brood is taking the money from my pocket in consuming honey; and I would feed it to the chickens if it were possible.

It is highly probable that the rearing of brood at that rate would make the difference in the honey-yield. Twenty pounds of honey to feed the overplus of brood above what was contained by the other colonies, and 40 pounds the bees might gather while caring for the brood, should not be too large. By this way of figuring I have already lost $5 on the brood in that colony, and a very fair prospect of losing more is still before me.

In flying-bees these colonies appeared about equal, and none of them had attempted to swarm. I did not describe them because they were better than others in the apiary, but more because they were examined to-day.

I am about to conclude that the bees never carry eggs to place in queen-cells when they have a queen to lay them; also, that the queen puts eggs into queen-cells of her own accord, and the bees direct the swarming; that when the bees do not swarm out the queen will destroy the cells a day or two before the young queens are ready to hatch, unless they are defended by bees; but the bees, I think, will not defend them if there is plenty of space for storing honey in the hive. If the cells happen to be in some out-of-the-way place not frequented by the queen, they are allowed to hatch, and in this way I have several times known an old queen and a virgin queen also to accompany the first swarm.

If the above is true, it will be seen that the queen may be confined to a few combs, and though there may be queen-cells built if there is plenty of room for the bees, she will be caused to destroy the cells for her own safety, checking swarming meanwhile, which would occur should a young queen hatch and "notes of war" be heard.

Bradford,♂ Iowa.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "It is not convenient for me to send the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

Our Catalogue of Bee-Keepers' Supplies will be sent to any one desiring to get a copy. Send name and address, plainly written, on a Postal Card for it.

Local Convention Directory.

1886. *Time and place of Meeting.*

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Getting Considerable Honey.—Will B. Robinson, Upper Jay,♂ N. Y., on July 13, 1886, says:

We are getting considerable white clover honey this season. I commenced the season with 8 colonies of black bees, and have had only three swarms as yet, but they each gave me a 25-pound case of honey before they swarmed, and they are now at work in the sections. If basswood turns out good, we will have a bountiful harvest.

Long Honey-Flow, etc.—W. M. Woodward, Custer,♂ Ills., on July 13, 1886, writes:

Clover is still yielding honey after almost seven weeks. I have almost 1,000 pounds stored now, when all is finished off, and more coming, to all appearance. I have increased my apiary from 17 to 48 colonies, and nuclei that will easily build up. The early heart's-ease is opening out, and will be sufficient, I think, to carry the honey-flow through until frost, with good weather. I expect to get 150 pounds of clover honey from one colony of black bees. The Albinos have not done well. They do nothing but swarm, having swarmed twice all around. The Syrians have not swarmed, and are now piling in the honey. They are the best bees I have seen in every way, except that they cap their honey so thin that it shows through badly.

Very Dry Weather.—F. Roulo, Portville,♀ N. Y., on July 12, 1886, says:

I commenced in the spring with 100 colonies, and increased them to 179 full colonies and 18 nuclei; the most of them contain 6 frames. I have taken, so far, 2,600 pounds of honey. It is very dry now. Basswood has commenced to blossom, but the bees work only a little while in the morning and toward night. I produce mostly comb honey.

Viper's-Bugloss.—Adam H. Wallbridge, Jr., Bellville, Ont., on July 13, 1886, writes:

Within the last four years there has appeared here a plant or weed the name of which I do not know, but it is visited by bees constantly in preference even to white clover. It must be an excellent honey-plant. Is it the rag-weed? This is the only thing I can liken it to, yet it does not exactly answer the shape of the flowers on that plant. Would you be kind enough to favor me with the name of the plant, and if convenient its value as a bee-plant?

[The plant sent by Mr. Wallbridge, is viper's-bugloss, or *Echium vulgare*. Gray says it is a troublesome weed in Virginia, but rare in the North. I think I have heard Mr. D. A. Jones say that he considered this one of our best honey-plants, and I well remember seeing it entirely covering the waste places about one of his bee-yards. It is a large plant with dense blue flowers, and with its near relative, borage, seems to secrete in "rain or shine."—A. J. Cook.]

Discouraging Prospects.—Ira Barber, De Kalb Junction,♂ N. Y., on July 12, 1886, writes:

The prospect is that the crop in this locality will be a perfect failure. There has been quite a fair amount of clover, but it has only secreted just enough honey to give bees a living, and a light start in the sections. Basswood has been in bloom nearly a week, but so far there has been no honey in the flowers, and it must secrete honey soon or we will not get any of the sections filled. Swarming has been the lightest that I have ever known, as only 8 colonies have cast swarms in my yard of 140 colonies. My opinion now is that the outlook for surplus honey from this locality this year will not lower the market price of honey in the cities very much.

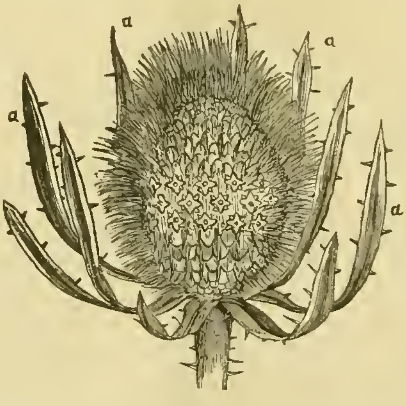
Bees in Florida.—John Y. Detwiler, New Smyrna,⊙ Fla., on July 2, 1886, reports:

Bees are comparatively idle, so far as external appearance of the hives are concerned. Prospects seem favorable for a heavy bloom of the cabbage palmetto later. So far I have not observed any mangrove bloom. For several days I have been engaged in clearing a piece of mangrove marsh near my residence. I find nearly half of the larger trees killed to the root, and the balance throwing out sprouts from the body several feet from the ground. I have not the least doubt but that in two years from now, our supply of bloom from that source will be more than sufficient for all the colonies on the coast.

Teasel Honey.—C. A. Camp, Painesville,♂ O., on July 2, 1886, writes:

It has recently come to light through private sources, that Mr. Doolittle's success of $1,000 per year from less than 100 colonies of bees, comes from teasel, which is cultivated. Now of what worth is his experience to any one who does not raise or have teasel? And why has he not told the world where his honey came from? I have written to the other bee-papers about the teasel matter. Probably there is not 10 square miles of teasel in the United States.

[Mr. Camp must have been sleeping while so much has been said about "teasel for honey" in the bee-periodicals. It has been well understood that Mr. Doolittle's honey crop came from "teasel" for several years; but lately it has been of but little value because of its being killed in winter so easily, and its consequent unreliability as a crop. In 1877 he was awarded the "Thurber Gold Medal" on honey from "teasel," and it was so stated at the time in all the bee-papers, and we here re-produce the engraving of teasel which we then used in the Bee Journal in publishing the account of that medal award. It is not, and never has been a "secret," and we cannot imagine where Mr. Camp has been during the past decade, not to have known it.—Ed.]



My Experience with Bees.—A. B. Colquhoun, Blooming Prairie,♀ Minn., on July 5, 1886, writes:

On July 4, 1885, I obtained a young but fine colony of Italian bees. They went to work immediately, and by fall had 30 pounds of surplus honey gathered, but I only took half of it out until spring. I put them in the cellar on Dec. 3. and took them out on the 12th of last April. I cleaned the dead bees out of the hive every week or two during the winter, and I think half of them died, but they were pretty strong in the spring. I have obtained 20 pounds of nice honey, gathered this spring from the willows, dandelions and white clover. They swarmed five times, but the last swarm was so small that I caught the queen and returned the swarm to the old hive, so that I have five good colonies. Being afraid that the old colony might swarm again, I looked over the frames and found as many as a dozen queen-cells, all of which I cut out, as well as a lot of drone-comb, and placed them so that I could see whether the bees would build drone-comb again or not, and I find that they are not; they are building it up with worker-comb instead. My first swarm came out on June 14; the next on June 24; the next on June 26; the next on June 27; but the old colony is still pretty strong. In the hive of the second swarm I had strips of foundation about an inch wide stuck all along the frames. I had a glass in one side of the hive so that I could see what they were doing. They commenced to work on the other side of the hive, and have some of the combs built pretty nearly down, and I have been watching, and they have not built one bit of drone-comb yet.

Abundant Yield.—Wilson Sherman & Son, Chester Centre,♀ Iowa, on July 12, 1886, write:

There has been an abundant yield of honey through central Iowa this season. Our bees have done the best this season that we ever have had bees do since we commenced keeping bees. We commenced the spring with 20 colonies, increased them to 28, and obtained 3,400 pounds of white clover honey. I do not think we will have a very large fall crop, as we have not had a good rain for two months.

The Season in California.—S. M. W. Easley, Newbury Park,♀ Calif., on July 3, 1886, writes:

The honey season for this part of Southern California is now over. The production was much less than was expected. The early warm weather in January and February, and the cold in March and April, and then no rain in May or June, has made the honey yield one-half or two-thirds less than in 1884. I moved my bees last year when they were full of brood and honey, and lost nearly one-half; and what I had left was in poor condition. I started with 280 colonies and increased them to 624, which I expect to reduce to 500 by uniting, as the season has turned out so dry. My yield per colony has been 98 pounds of extracted honey. The average yield of 2,000 colonies in this part of Ventura county, has been 124 pounds. My yield per colony was 317 pounds for 1884. Last year I took no honey, except four tons that I left in the supers in 1884. As you can see by the market report, honey is very low in San Francisco, though I think prices are likely to come up soon.

Bees in the Mails.—H. Walter McWilliams, Griffin,⊶ Ga., on July 8, 1886, writes:

In regard to shipping queen-bees I have received the following through the untiring efforts of N. J. Hammond, of Georgia, a personal friend of mine:

"Hon. N. J. Hammond, House of Representatives.—Dear Sir: Yours of June 24 is received. In regard to *queen-bees* mailed at Griffin, Ga., I will say that it will be changed so as to read *queen-bees with necessary attendants.* I think this will obviate the difficulty. Will change next Guide.
Yours, JOHN JAMESON, *Supt.*"

Please give Hon. N. J. Hammond credit in the JOURNAL for this. He also informs me he will do all in his power for the above, in the new treaty with Canada.

[The thanks of bee-keepers are due to the Hon. N. J. Hammond for his efforts in their behalf. We hope that he will be able to help us also in the formulation of the new treaty with Canada. We cannot now send as much as a small electrotype of a bee into Canada by mail. The trouble on the "line" is a very great annoyance in very many ways. We can mail many things to Europe more readily and cheaply than we can to Canada, even if we can do it at all. All this needs revision and improvement—ED.]

Securing Worker-Comb in Brood-Frames.—9—Jno. C. Gilliland, (15—24), Bloomfield,♀ Ind., on July 8, 1886, writes:

The Hutchinson-Doolittle plan of securing worker-comb in brood-frames, without foundation, works like a charm. I use one section of the new Heddon hive with comb-foundation starters in each frame, ¾ to 1 inch wide, with queen-excluding honey-board above, and put on surplus boxes at the time of hiving swarms; part of the boxes containing full sheets and part only starters of foundation, and the bees build worker-comb in brood-frames and store as much in boxes as swarms hived on full frames of foundation in brood frames. You must *be sure* to put on the surplus-case at *time of hiving*, and *not* the next day or next week, as Chas. Mitchell did; as in that case they will only build drone-comb as his bees did. From experience with several colonies I do not believe that the young queen hatches until within an hour or so of the swarming of second swarms. I have opened several hives this season, one and two days after the queens began to call, to cut out queen-cells, and I found no queen out of the cell, but one or two with caps of cells partly cut off, and as soon as the frame was taken out of the hive the queen would come out. I have also seen queens fly in one minute after coming out of the cell. The bees decide whether to swarm or not, and if swarming is the programme, they keep all queens in the cells until about ready to start. If they decide not to swarm they allow the oldest cell to hatch and then destroy the other cells. I had one colony of black bees in which the young queen was calling before the prime swarm issued, and, taking the frame containing the queen-cell, I made a new colony which has never swarmed, and this is the fourth summer since. The old colony swarmed about four weeks after division, and left for parts unknown.

Honey-Dew from Oak.—C. Theilmann, Theilmanton,⊸ Minn., on July 12, 1886, writes:

I send a few oak branches on which will be found honey-dew; also acorns which seem to be pierced by some insect, or else it is an overflow of the sap of the tree. My bees are working vigorously on both leaves and acorns, while basswood is still in bloom. I would like to know whether the honey on the leaves is "bug-juice" or louse honey, or Nature's own make. What causes the honey on the acorn? Please answer through the AMERICAN BEE JOURNAL, as it will probably interest a great many bee-keepers.

[The nectar which seemed to stream out of the acorns and drop on the leaves came wholly, so far as I could learn, from acorns which were pierced by a caterpillar, probably a Tortricid or a Tæneid. I do not know the moth that comes from these larvæ, but I should like to know. The acorns were being eaten by the larvæ, and probably the saliva of the insect acted as a ferment to change the starch of the acorn into sugar. The nectar then may be called sap from the nut, which owes its existence to the irritating presence of an insect. This nectar was in such quantities that it could easily be sampled, and I pronounced it very pleasant, as did several of our students. I could see no sign of plant-lice anywhere. We often read of bees getting honey-dew from oak. It would be interesting to know if it is always from this same source.

In the third line from the end of my reply to Mr. Waller's question on page 442, for "trees" read *bees.*—A. J. COOK.]

Bee-Cellar, etc.—F. Roulo, Portville,♀ N. Y., on July 13, 1886, enquires thus:

1. Would it be safe to winter 100 colonies of bees in a bee-cellar mostly on the top of the ground? It is 16 feet square inside, and 7 feet from the ground to the upper floor in the middle, and 4 feet under the eaves. The upper floor is arched, with a ventilator 5x6; a ventilator under ground of two 3-inch tiles. There is a bank of dirt 3 feet thick up to the eaves, and the rest is covered with 18 inches of sawdust and a board roof over it. I wintered 62 colonies of bees in it last winter. They wintered well; only one colony was dead when I took them out. 2. My bees are in Heddon hives. Would it be best to take the cover off and cover the frames with a piece of burlap before putting them in the cellar, and put a stick on the back part of the hive in piling them up, for ventilation? How thick should the stick be?

[1. Yes, I should prefer 100 colonies rather than less in a repository like the one you describe. When the weather is cold keep the temperature of the repository up, by closing the ventilators. Do not allow the mercury to go below 45°, Fahr.

2. No, if I removed the cover I should replace something thicker and more non-conducting than "a piece of burlap." I believe that if you will experiment you will find that you will not need to remove the board covers at all. Give full lower ventilation.

In my reply to Mr. Weidman, on page 442, and closing on page 443, the last four words, "cells of full length," should read *comb foundation.*—JAMES HEDDON.]

Bees Near a Railroad.—A subscriber at North Manchester,♂ Ind., asks the following:

A friend of mine who had been very successful with bees for 15 years, moved to town where he aimed to keep a few for his own use; but he was compelled to place them within 50 feet of a railroad track. The three years he has had them there have been followed with heavy winter losses, and loss of swarms in summer. Will they ever do well that close to the track?

[The above is replied to fully in the answers to Queries 198 and 199, page 100.—ED.]

Drouth in New York.—A. Flag Robson, Italy,⊶ N. Y., on July 9, 1886, says:

The best prospect for years, of a large honey crop, is blighted by the drouth in this locality. Basswood yields scarcely a living for the bees; although there is a fair bloom on the same the bees seem to be taking a midsummer vacation.

☞ By some oversight the address of M. & H. F. Coffin, Milton, Kentucky, in an advertisement, has been published for 3 or 4 times as N. Y., instead of Ky.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

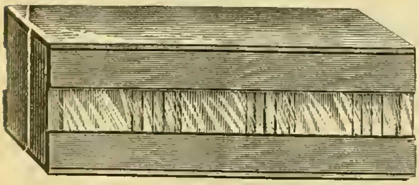
ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

* * *

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.



* * *

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

* * *

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00. Orders filled **at once.**

* * *

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at **$6.00** each.

* * *

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)..............$1 00
" 100 colonies (220 pages) 1 25
" 200 colonies (420 pages) 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

* * *

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

* * *

☞ Our stock of Simmins' pamphlet on Swarming is exhausted, with several orders unfilled. We have more on the way, and as soon as they come all orders on hand will be filled.

* * *

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

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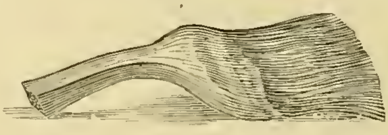
Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and a Voting Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Voting Blank.

* * *

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen.



Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 19, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—The new crop of honey is coming forward quite freely, and looks well; demand is light, however, at 14 to 15c. Extracted, 5 to 7c. per lb.

BEESWAX.—Scarce at 25c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The honey market is almost devoid of interest, more particularly in comb honey. We find quite a large stock carried over in dealers hands, although our stock is small. What we have is dark and off grades, which leaves us in a good position for the coming crop. It is difficult to tell what prices will be, but reports received from nearly every section of the country, indicate that prices will be low. Present quotations are as follows: Fancy white comb in 1-lb. sections, 10@12c.; fancy white comb in 2-lb. sections, 8@10c; buckwheat in 1 and 2-lb. sections, 5@8c; extracted white clover, 6c; extracted, California, 4½@5c; extracted, Southern, per gallon, 45 to 55c.

BEESWAX.—23 to 28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—New honey is coming forward freely. The quality is exceptionally fine and the crop will be large. White to extra white comb, 9@11c. Extracted, 4@4½c. for white; 3½@3¾c. for amber.

BEESWAX.—22@23c.

O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—New honey is coming in quite freely, and is bringing from 11 to 13c.

BEESWAX.—Firm, at 25 cts. per pound.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—The demand for extracted honey has been very light of late, but it seems to be improving gradually for manufacturing purposes. There is considerable honey in the hands of commission merchants, and prices are very low—3½ to 7 cts. per pound is the range of prices. Prices of comb honey are nominal.

BEESWAX.—Arrivals are good and the demand fair. We pay 18@22c. for fair to choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Our new crop is arriving freely and is very fine. Sales are slow and prices low. One-lbs., white clover, 14c.; dark 1-lbs., 10 to 11c.; 2-pound white clover, 12c.; dark 2-lbs., 8 to 10c.; California 2-lb., white sage, 10 to 12c.; dark 2-lbs., 8 to 9 cts. Extracted white clover, 5 to 6c.; dark, 3 to 4 cts.; California white sage, 5 to 5½c.; dark, 4 to 4½c.

BEESWAX.—20 to 22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The demand is limited but the supply is very much better in quantity as well as quality. The new crop receipts are very fine. We quote: Choice white in 1-lb. sections, 15@16c.: same in 2-lb. sections, 14@15c.; dark, nominal, 10@15 cts. Extracted, choice white in tin, 6@8c.; same in barrels and kegs, 5@7c.

BEESWAX.—24@25c

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The prices of honey on this coast are now so low that producers can hardly make any profit, and a good many apiarists will quit the business if prices do not improve soon. The crop is large, and the quality of very choice quality. We quote 3½ to 4¼c. in a jobbing way, and perhaps a trifle more; but if holders wish to force sales, lower prices must be taken. Comb honey sells slowly at 6 to 9c., but just now it is not the season for comb honey, and prices may improve.

BEESWAX.—Is generally held at 22 to 23c. for average lots.

SCHACHT & LEMCKE, 122-124 Davis St.

Convention Notices.

☞ The Cortland Union Bee-Keepers' Association will hold a basket picnic at Little York, N. Y., on Wednesday, Aug. 18, 1886. All interested in bee-culture, with their families, are cordially invited to attend and have a good time.
D. T. SHATTUCK, *Sec.*, Homer, N. Y.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

Advertisements.

WILL sell 400 full Colonies of Bees in lots to suit buyer; or will sell Apiaries already stocked up. **Now is your time.**
Address, **H. R. BOARDMAN,**
28Atf EA. TOWNSEND, Huron Co., O.

COLONIES of Italian Bees in 10-frame hives at $5.00; Tested Queens at $1.25; Untested Queens at 75 cts.; 2-frame Nucleus (no queen), $1.50; three-frame Nucleus (no queen), $2.00. Address, **OTTO KLEINOW,**
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Address, **E. R. NEWCOMB,**
PLEASANT VALLEY, Dutchess Co., N. Y.
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ITALIAN QUEENS, by Return Mail, Tested, 1.00. Untested, **75** cents.
26Atf **GEO. STUCKMAN, Nappanee, Ind.**

FINE Tested Italian Queens of this year's breeding, for $1 each; Untested Queens only 65 cts. each, by return mail. Hives and Sections at rock-bottom prices.
B. J. MILLER & CO., Nappanee, Ind.
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My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
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BEE-KEEPERS, before ordering your **APIARIAN SUPPLIES,** Send for our large Illustrated Catalogue, sent free to any address.
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I CAN use a few thousand pounds of Extracted Honey of good quality, if cheap. Address,
H. R. BOARDMAN,
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HONEY-PAILS.—As I will dispose of my honey crop by other methods, I offer my stock of 3-lb. Jones' Pails at **$5.25** per 100. Several hundred of them are labeled, and the first orders will take the labeled ones. **C. W. DAYTON,**
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TWO HUNDRED
Select Tested Italian Queens!
Large, Handsome and Extra-Prolific Queens
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By return mail. Safe arrival guaranteed. Make Money Orders or Postal Notes payable at Salem, Mass. Address, **HENRY ALLEY,**
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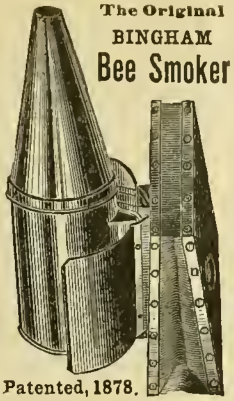
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BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last, I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

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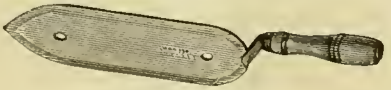
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BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

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First-Class Goods at Low Prices.
A FINE LOT OF ITALIAN BEES For Sale Cheap.
Send Postal Card for Illustrated Circular and Price-List.
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13Dtf HARTFORD, WIS.

WE Make a Specialty of HONEY-LABELS, Section Cartons, Extracted Honey Packages, etc. Our large, 20-page Catalogue is free.
A. O. CRAWFORD, S. Weymouth, Mass.
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How to Avoid them,
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12 Warranted Italian Queens, by return mail, $8.00; 6 for $4.25; single Queens 75 cts. each, after Aug. 1.
Carniolan Queens at double the price of Italians. Address,
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WE would say to the readers of the American Bee Journal that we are making a specialty of handling Pure Comb and Extracted Honey, Wood and Willow Ware, Bee-Supplies, &c., &c. Those looking for a market for Pure White Honey should address, **CLICKENGER & HUFFMAN,**
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WE, the *original inventors* of the one-piece Sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
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WARRANTED Queens, by mail			....	$1 00
"	"	"	per ½ Doz...	5 00
SELECT	"	"	each.........	1 25
"	"	"	per ½ Doz...	7 00
TESTED	"	"	each.........	1 50

By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.

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Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. *Price List Free.*

9W1y **J. M. JENKINS, Wetumpka, Ala.**

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A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

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In use 30 years. The only successful remedy for

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FOR WINTERING BEES ON SUMMER STANDS.

THEY are made identical and interchangeable with our Standard Langstroth Hives, as advertised and described in our Catalogue. All upper stories and surplus arrangements made by us will fit this double-walled brood chamber. Prices: Nailed, **50c.**; in the flat, **35c.** per hive, in addition to our prices of the Standard Langstroth. We also make our 7⅛-inch Caps with a sloping or Cottage Roof, which is worth **20c.** nailed and **15c.** flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

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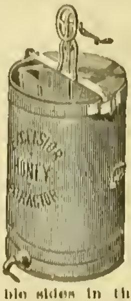

In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

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For 2 American frames,	13x13	inches.....	...$8 00
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For 3 " "	10x18	"	.........10 00
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For 3 " "	13x20	"	.........12 00
For 4 " "	13x20	"	.........16 00

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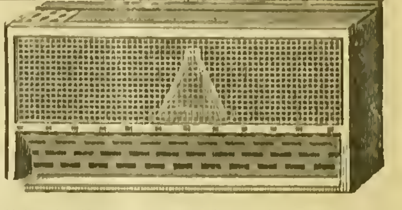

Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

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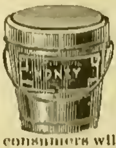
NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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Newest and Best.
Black Walnut, Drop Leaf Table, Cover, 3 Drawers and Full Set of Attachments, only $11.50, Cash or FREE for [illegible] Subscribers to ☞

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We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. July 28, 1886. No. 30.

"If the weather is fair,"
Said the butterfly, jauntily and free,
"If the weather is fair,
I'll go dance in the meadow there!"
"And I," said the prudent bee,
"Will be early at work, you will see—
If the weather is fair."

• • ◆ • •

Make a Market for honey in every village and city throughout the country. Honey Leaflets will do it.

• • ◆ • •

E. France & Son, of Platteville, Wis., have taken from their bees about 42,500 pounds of honey; and what is better, they have sold a good share of it without shipping it to any large market.

• • ◆ • •

A Roll of Honor might well be started with the name of E. Stahl, Kenner, La. He has so much faith in the National Bee-Keepers' Union, that he has paid dues and assessments up to the year 1890. And yet there are thousands who have not become members, even for one year!

• • ◆ • •

In Switzerland statistics show that there are 207,373 colonies of bees kept. These figures were obtained by the census which was taken on April 21, 1886. The number varies in the different Cantons from 500 to 40,000 colonies. The amount of honey obtained from them is not stated.

• • ◆ • •

An Average Crop of Honey has been produced this year, taking the country all over. In some places it is a very large crop; in others very small. Basswood was a total failure in some sections; in others only a moderate yield. The fall crop will be very limited. In view of this, the prices for honey should not be as low as they are now quoted. The prospect is good for an advance rather than a decline.

• • ◆ • •

Beeswax is nothing more than the voluntary excretion of the honey-bee, like perspiration from the human body.

Misrepresentations About Honey Adulteration.—On page 443 reference was made to assertions made in Dr. J. H. Kellogg's book about "artificial comb honey," etc. We wrote a letter to the Doctor, as there printed, and have received the following very courteous reply:

> Battle Creek, Mich., July 17, 1886.
>
> *Thos. G. Newman, General Manager of the National Bee-Keepers' Union, Chicago, Ills.*
>
> Dear Sir:—Yours received. Thanks for your courtesy in calling my attention to the article. I shall take pleasure in publishing what you say upon the subject in the next issue of my Journal, *Good Health*. I consider it a part of my duty to call attention to food adulteration of every sort wherever it is to be seen, but have no sympathy with those who would make the evil of adulteration to appear greater than it really is. The statements in the Hand Book were made upon what I supposed to be good authority. There have been 13,000 copies of the book printed, but it is printed from plates. I shall take pleasure in correcting the plates in accordance with the facts, to which you call my attention, in the next edition. Not being a practical bee-keeper myself, you can easily see how I might be easily led astray by such statements as that of Prof. Wiley. I have personally known cases in which persons have fed glucose to bees in the summer time, when honey-bearing flowers were scarce on account of drought. I, of course, do not know how extensively this practice prevails. Again thanking you for your courtesy in calling my attention to the matter, I remain, very truly yours,
>
> J. H. Kellogg.

Feeding Bees with glucose to preserve life, when honey is not to be obtained from the flowers, is quite different from making combs of paraffine and getting the bees to fill it with glucose for the purpose of adulteration.

That Wiley *lie* is reponsible for nearly all that has been written on the subject of "artificial comb honey." He has done more damage to the pursuit of bee-keeping, by publishing that lie, than he could make amends for in a life-time of a thousand years. To his eternal disgrace be it said, that he has done scarcely anything to counteract the influence of that so-called "scientific pleasantry" since it was perpetrated.

• • ◆ • •

Glass to Prevent Robbing. On page 419, we gave an item from the *Bienen Zeitung*, upon which Mr. C. W. Dayton remarks as follows:

> While the method of using glass before the entrance does well for awhile, the bees will become accustomed to it and the glass will be discarded. It may answer for beginners and amateurs to experiment with, but the true apiarist will prefer strong colonies and precaution.

• • ◆ • •

Paralyzed Bees.—Mr. W. F. Kunzler, of Fulda, Ind., writes us as follows concerning the disease causing this trouble:

> In the *Bienen Zeitung*, of Nordlingen, for 1881 you will find on page 6 an answer to Query, No. 278, a full description and a drawing of a disease called "May-sickness" or *Mucorine*, which befalls bees in May and June, so that they, by hundreds, run on the ground, cannot fly, and die in a short time afterwards. This disease is caused by a fungus (*Mucor Mucedo*) which sprouts out between the rings of the abdomen, and is perhaps the same as befell the bees of the sender of Query, No. 278. Now I would request you to consult Prof. A. J. Cook, and publish the drawing and description of the said disease, *Mucorine*.

If we can find the paper alluded to, we will do as requested.

To Assort and Grade the Honey is very necessary. It must be insisted upon over and over again that such should never be neglected. Mr. C. H. Dibbern, in the *Plowman*, gives the following very good advice:

> With the production of a crop of honey comes the task of taking care of it and getting it ready for market. Comb honey should always be stored in a dry, warm room. As it comes off the hives, carefully sort it into at least two grades, and a third grade will be necessary later in the season. After it has been removed from the hives two weeks, it must be thoroughly fumigated with sulphur, to kill the hatching moth worms, and this should be repeated at intervals during the warm weather. The sections must be scraped of every particle of propolis, and then nicely packed in new crates holding 12 or 24 sections each, with glass on at least one side. We cannot be too careful in packing and grading our honey, as our reputation largely depends on the way it is packed for market.

• • ◆ • •

The Fall Crop of Honey will be very light, where dependence is made upon fall flowers in general. Those who are fortunate enough to have sweet clover are rejoicing in the prospect for a good fall crop. The markets have for some time been quite bare of honey, and we hope that bee-keepers will not rush their honey on the great cities, and thus glut the market. Honey will bring a fair price, if care is taken to supply all the local markets, and thus distribute the honey over the whole country, instead of glutting the city markets.

• • ◆ • •

The National Convention is to be held at Indianapolis, Ind., on Oct. 12, 13 and 14, 1886. Mr. F. L. Dougherty, the Secretary, writes as follows:

> Please say that the committee is hard at work perfecting arrangements for the coming convention, and will soon be ready to announce particulars. Prospects are promising for a prosperous meeting.

President Cutting also writes us that he is laboring to get up a very interesting meeting. Let the Convention for this year be the most interesting and profitable apicultural assembly ever congregated on American soil.

• • ◆ • •

We are daily expecting a lot of Yucca brushes. As soon as they arrive, all orders now waiting will be filled.

• • ◆ • •

The July Number of the Philadelphia *Ladies' Home Journal* contains the second chapter of a story written for its columns by Harriet Prescott Spofford, a seasonable article on Garden Parties and out door entertaining, by Christine Terhune Herrick, an interesting article on common grammatical errors, and how to appear and talk well in company.

Mrs. Louisa Knapp, its editor, has met with a remarkable success in building up that paper to a circulation of over 270,000 paid subscribers in three years by her rare tact and genius in catering to the home instincts of her sex, in the rich feast of good things set before her readers every month. The *Journal* is a perfect gem, handsomely printed and illustrated, and employs only the best writers, such as Harriet Prescott Spofford, Marion Harland, Rose Terry Cooke, Mrs. Christine Terhune Herrick (Marion Harland's daughter), Mrs. J. H. Lambert, of Philadelphia, Mary Abbott Rand, Elizabeth Stuart Phelps, Louisa Alcott, and Josiah Allen's Wife have promised to contribute the coming autumn, provided health and strength will permit of additional work.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Using Plain Sheets of Wax.

Query, No. 283.—Do you know of any bee-keeper who has tried putting in a wired frame a plain sheet of wax without the delineations of the cells pressed upon it, and then gave it to a colony of bees for working up into comb? If so, please say what the result was; if not, please try the experiment and report through the AMERICAN BEE JOURNAL.—L. J. S.

The experiment has been tried frequently with unsatisfactory results.—G. W. DEMAREE.

I have heard that it has been done, but I do not remember with what result.—H. D. CUTTING.

I have used plain sheets of wax in sections in that way. The result generally was that they were left as they were.—G. M. DOOLITTLE.

The bees often build comb on it, but it is very irregular, and may be drone-comb as well as worker-comb.—DADANT & SON.

I tried something of the kind before foundation was made. but not with wire. It was not always successful.—C. C. MILLER.

Yes, several of us have tried plain wax-sheets with uncertain and unsatisfactory results. If you try it you will use nothing but printed sheets after the experiments.—JAMES HEDDON.

I do not know of any one who has tested the matter, and I cannot see any practical value in such a test. If any one has the curiosity and time sufficient, they may find out how much longer it takes to draw out comb than to build new from simple starters.—J. E. POND, JR.

* * *

Space Between Brood-Frames.

Query, No. 284.—How much space should be allowed to a frame? or what should be the respective width of an 8 or a 10 frame hive?—G. R.

For a ⅞-inch top-bar allow 1½ inches from centre to centre of the frames.—H. D. CUTTING.

I use 1½ inches to the frame.—G. M. DOOLITTLE.

An inch and three-eighths works nicely.—W. Z. HUTCHINSON.

About 1½ inches to a frame—8 frames in 12 inches.—A. J. COOK.

With perfectly straight combs I am inclined to favor 1¼ inches from centre to centre; certainly not closer, and perhaps this is too close. I am anxious for light on the matter.—C. C. MILLER.

There are advantages both ways. After many experiments Father Langstroth gave a net space of 14⅛ inches for 10 frames. I use and prefer 11½ inches for 8 frames.—JAMES HEDDON.

One and three-eighths inches from centre to centre of the frames is just right for the brood-nest, though they may be worked a little closer or a little wider apart. I make my 10-frame hives 14⅛ inches wide. They give entire satisfaction.—G. W. DEMAREE.

After much experiment I am confirmed in the belief that brood-frames should be spaced from centre to centre 1⅜ inches, no more nor less. One-fourth inch should be allowed at each side.—G. L. TINKER.

The space between frames should be not less than 1⅜, nor more than 1½ inches. Mr. Langstroth used 1 7-16 as a standard; we use 1½ inches.—DADANT & SON.

A 10-frame hive should be 14 inches wide to give the best results in surplus comb honey; for extracted honey it should be ¼ to ½ inch wider. The regular Langstroth 10-frame hive is 14⅛ inches wide inside. My belief is that frames are spaced too wide apart, as a rule, to give the best results in comb honey.—J. E. POND, JR.

* * *

Clarifying Beeswax.

Query, No. 285.—What is the best method of clarifying wax? If acid is used, of what quality and strength? Does it in any way injure the texture of the wax?—R.

Allow it to cool slowly when heated. I do not know, but I should think that acid might do harm.—C. C. MILLER.

Heat the wax slowly, and let it cool *very slowly*. Acids will do for bleacher's wax, but not for foundation wax.—DADANT & SON.

To every 10 pounds of wax use one pint of vinegar, together with one quart of water, in melting. Strain and fix so it will cool very slowly. When cold scrape the sediment from the bottom.—G. M. DOOLITTLE.

Frequent melting in clean hot water, in my opinion, is the best way. Acid of any kind cannot be used without injuring the wax.—G. W. DEMAREE.

Let the melted wax cool slowly in a tall tin can. Surround the can with sawdust or some non-conductor of heat.—W. Z. HUTCHINSON.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ⊸ east; ⟜ west; and this ♂ northeast; ↖○ northwest; ○↘ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Winter Stores of Bees.

WM. F. CLARKE.

Surprise is expressed at my claims, on page 293, and Mr. Heddon asked, "Is it possible that a man like Prof. Cook, a man we all have to look up to as an authority in these matters, should put a *quietus* on the pollen theory, and never realize it, but all the time think that he was stating truths that sustained it?"

I answer unhesitatingly, it is both *possible* and *actual*, which positions I shall now proceed to prove.

Prof. Cook is an extraordinary genius. Extremes meet in him. He is like a noted clergyman who was wont to say that he could preach the *best* and the *worst* sermon of any man in London, (Eng.) On some phases of apiculture, Prof. Cook is away ahead of all his competitors; on others he is just as much in the rear. He reminds me of the proverb, "It takes great men to put forth great nonsense," or as a certain old book has it, "Great men are not always wise." I could easily cite illustrations of the correctness of these statements from the Professor's writings, but instead of doing this I shall call up an impartial and competent witness, Mr. Frank Cheshire, who, in the scientific volume of his great work on bee-keeping just published, page 90, says Prof. Cook has made "several statements which are astoundingly inaccurate," and on pages 94 and 98 repeats the assertion. On page 128, Mr. Cheshire says concerning a certain point, Prof. Cook "is so inaccurate in every particular, that *he is best refuted by quotation*," precisely the way in which I claimed to have refuted him at Detroit, after listening to his essay on the pollen theory. The following from pages 132 and 133 is pretty hard on one whom "we all have to look up to as an authority." Mr. Cheshire says:

"An old French entomologist published some capital drawings of bees' legs, but his numbering read backwards, since the reversing action of the printing press had been forgotten. He was copied by Blanchard, who, failing to note his authority's mistake, called the drone leg the queen leg, while the latter went to the credit of the drone. Dr. Duncan translated Blanchard, and quite innocently, and very pardonably, repeated Blanchard's blunder; while Cook, who has taken many of the illustrations in Part I of his Manual from Duncan, continues to the present hour, to publish the error. Surely, after eleven editions, the time has come for breaking the spell, and giving the queen her own legs back again."

Now, in view of all this, Mr. Heddon will surely admit that it is "possible" even "that a man like Prof. Cook" may be mistaken, as well as other folks.

I now proceed to perform the other half of my task, and will show that Prof. Cook, when trying to establish the pollen theory actually knocked it in the head, and gave it its "*quietus*." Here I must complain of being only partially quoted by Mr. Heddon. I do not accuse him of wilfully suppressing any part of my argument—he is incapable of that—but he has overlooked what I regard as a most important substantiation of my "claims;" probably from not viewing the matter in the same light that I do. He says: "Mr. Clarke tells us that the pollen theory went down when Prof. Cook stated that bees could not breed without pollen, and that we know that they do breed in confinement, and come out in good health in the spring. Why, certainly, we knew this before the pollen theory was conceived, and this fact in no way disproves that theory." But this is only half of what I stated on page 293. Here is the whole sentence: "He" (Prof. Cook) "has maintained that bees cannot breed without pollen, *and that they cannot stand work without it.*" Mr. Heddon says: "Bees making chyme to feed brood, do not consume the pollen, for two different individuals cannot both eat the same food." The reply I made to this plea at Detroit was that when mothers chew food and give it to their infants, they are not very particular about swallowing some of it, and, in fact, often do swallow a portion. But, I said, apart from this, when bees are rearing brood they *work hard*, they are not in that inactive state in which they can do without such food as is needed to repair wasted tissue. Consequently, they must and do consume pollen for their own wants, when they rear brood.

Here is the argument which I turned against him in Prof. Cook's own words:

"As honey contains no albuminous food, except the pollen in it, it follows that bees must have bee-bread to rear brood, and also to preserve their organisms intact during the busy part of their existence. To say that bees may breed with no bee-bread, *or that the active workers need none*, is to say that you can have an ocean without water, a desert without sand, or bricks without clay."

I asked, "Is it not a busy part of their existence" when bees rear brood? Are they not then in the active working condition? If so, they must have pollen, and the fact that they rear brood largely in winter quarters, proves that they can and do consume pollen safely, which knocks the bottom out of the theory.

Mr. Heddon appears to prefer that his bees should not breed when in winter confinement. Mr. Hall, on the other hand, considers it essential to his success to have plenty of brood in the hives when he takes them out of the cellar. His bees are imprisoned longer than Mr. Heddon's, and on Mr. Heddon's theory, must be subject to greater fecal distension, yet they consume pollen freely, for they rear brood largely. Notwithstanding, they winter with a very small percentage of loss. "How is this thusly," if the pollen theory be true? The conundrum is too hard for me.

Here I cannot resist the temptation of turning Mr. Heddon's own flank. In his report of a year ago last April, he said: "I am quite positive that there is something about breeding, whether in confinement or when the bees fly regularly, which is very depleting to them." That is to say, *a la* Cook, it causes great waste of tissue, to repair which *they must have pollen.* In a recent article Mr. Heddon quotes my statement to the effect that bees breed in confinement, and come out in good health in the spring. Then he sets up a little "crow," and says triumphantly: "Why, certainly, we knew this before the pollen theory was conceived, and this fact in no way disproves that theory." He says in that same article in the AMERICAN BEE JOURNAL for April 8, 1885, that he can adduce abundant evidence that bees can breed "hivefuls" of young brood while in confinement, without becoming loaded with fecal matter. Now let us put all this together, and see what a "crazy quilt" of an argument it makes:

1. If bees consume pollen to any extent while in winter confinement, they will get "the all-destructive diarrhea." 2. If they rear young brood they must eat pollen, for (Mr. Heddon) "brood-rearing is very depleting;" (Prof. Cook) "it causes great waste of tissue," and "they can no more breed without pollen than bricks can be made without clay." 3. But, there is ample evidence (Mr. Heddon) that bees can breed "hivefuls" of young brood while in confinement, without becoming loaded with fecal matter; *i. e.*, without getting the diarrhea.

Instead of harmonizing this fact of breeding in confinement with the pollen theory, Mr. Heddon goes off at a tangent to discuss dry feces. About all he does, however, is to quote the Professor, who says with an air that would well become the Great Mogul of apiculture, when we appoint that potentate, "There is no foundation in the dry feces theory, I AM SURE." Again, "bees do not normally void feces in the hive, and NEVER DRY FECES." That settles it, unless, indeed, this should prove to be one of "several statements which are astoundingly inaccurate," such as according to Mr. F. Cheshire, Prof. Cook is sometimes betrayed into.

Mr. Heddon wandered off in a similar manner from the pollen theory to the question of dry feces in his last year's report. He says: "Let us all thank the Professor for setting us aright in this respect." In what respect? The true functions of the "sucking-stomach," using, Mr. Cheshire tells us, an old, but extremely misleading title, for he adds, "this wrinkled membrane could no more exert suction than could a balloon extract gas from the main." After this outburst of thankfulness for nothing, Mr. Heddon quoted the dogmatic assertions to which he has again treated us in his recent report. I replied at some length to these positive utterances in the AMERICAN BEE JOURNAL for May 27, 1885. It is needless to repeat what was then and there said. The argument remains unanswered, and, as I believe, for the best of all reasons, viz., that it is *unanswerable*.

Guelph, Ont.

Southern Planter.

A Grape-Grower Defending the Bees.

O. M. CLAY.

For long years in the United States many species of wood-peckers were called "sap-suckers," a name unknown to European scientists, whereas the so-called sap-suckers were wood-peckers, enlarging the orifice of holes made by the borers, in order with their barbed tongues to pull out the grubbs or larvæ, and eat them. I had a hard struggle here to overthrow this popular error and to prove that the wood-peckers (the "sap-suckers") were the best friends of the horticulturist, though eating some fruit.

So, now, after long years of culture of bees and grapes, through nearly three-quarters of a century, I am of the fixed opinion that bees do not and *cannot* puncture fruit. Let us look at this question at first *a priori*. As bees multiply so rapidly, and are armed with stings and poison to destroy their enemies, what would be the result if bees could puncture fruit? They would, of course, attack fruit, as more easily done, rather than seek flowers for honey—and destroy all sweet kinds in a short time. Nature provides for equilibrium in the production and maintenance of general and species.

For a long term of years I have had bees in the third story of my dwelling, and grape-vines, on the walls; and thus I have great opportunities for observation. I am also a cultivator of water-melons. When I cut the melons I leave the rinds near the house till evening for the bees to suck the juices, of which they are very fond. A few first find the melons; then they increase in numbers till the whole colony seems to be engaged in carrying off the treasure to their store-room.

Now if the bees could puncture the grapes, one being found, as the grape is much richer in sugar than the melon, it is logical to suppose that they would attack the grapes in force; but no such action takes place; a few bees find the broken hulls and suck the juices, but I have never seen any indication of a perforation of whole-skinned grapes.

For many years wasps were plentiful about my house, but finding them depredators upon grapes, I have broken up their nests and killed them out at all times; and now I hardly ever see one. The bees have of late failed to be seen about the grapes. This year the crop was unusually good, and left on the vines till frost; yet the grapes were all sound—whilst the melons were visited, as usual, with great avidity. I conclude, then, that at times the wasps and other insect-borers of the grape, are killed by the bad winters, when the attacks upon grapes subside. If the bees could puncture the grapes, why should not their attacks be regular? I have also some vines on trellises of posts and wire in the open ground. Here the leaves fall more early, and the grapes are attacked by birds and insects, and the bees then aid in the destruction of the grapes, whilst those on the walls, hidden under the late leaves, escape insects, birds and bees?

White Hall,⊙ Ky.

[We are glad that a man of such extended observation and practice as Mr. Clay, sustains the views presented in our last issue in regard to the question whether honey-bees ever puncture and injure grapes.—EDITOR SOUTHERN PLANTER.]

For the American Bee Journal.

Formation of "Cells" by Bees.

W. H. STEWART.

Much has been written on the wisdom of the honey-bee, as manifested in many ways, and more especially in the construction of honey-comb. I will give but one quotation from a noted German writer, who asserts as follows:

"The cells of bees are found to fulfill perfectly the most subtile conditions of an intricate mathematical problem. Let it be required to find what shape a given quantity of matter must take in order to have the greatest capacity and strength, occupying at the same time the least space and consuming the least labor in its construction. When this problem is solved by the most refined mathematical processes, the answer is, the *hexagonal*, or six-sided cell of the honey-bee, with its three four-sided figures at the base."

I agree that a portion of the above statement is true; but I must insist that other portions are erroneous. Man, and bees, are products of Nature; they are subject to natural law; they cannot defy or operate outside of "natural law;" from it there is no divorce.

Let us resort to a simple experiment "to find what *shape* a given quantity of matter must take in order to have the *greatest capacity*." Place in a suitable vessel a quantity of soft water; add to it enough soft soap to make a strong suds; dip the bowl of a clay tobacco pipe into this soap water, holding the mouth of the bowl downward. When the pipe is raised out of the water, "a given quantity" of the slimy or soapy water will be found adhering to the inner surface of the pipe bowl. Now blow in the stem of the pipe, and the current of air will form a bubble, and if the current of air is kept up through the pipe-stem, this "given quantity" of slimy water will take the shape of a globe; as yet more air is forced into this globular bubble, it increases in dimensions, all the while retaining the same shape until its strength is overcome, and it breaks.

Now the shape of this bubble was dictated by natural law. It was no accident. The experiment may be repeated, times without number, and the bubble will be globular every time, minus its elongation by gravity.

If the given material in the bubble would have contained a greater amount of air in the shape of a hexagon, then natural law and its cohesiveness would have dictated that it should take that shape before surrendering to pressure.

The law actuating fluids to press in every direction alike, would never admit of the formation of a single or lone bubble, in the shape of a hexagon; and if I mistake not, bees never form a lone or single cell in that shape. If we examine the scattered drone-cells found here and there on the surface of worker brood-combs in queenless colonies, where laying-worker eggs are being developed into drones, we will find all that part of such lone cells, that is raised above the plane of the worker-cells, round, and not hexagonal. Queen-cells are never six-sided.

Now experiment again with the pipe and soap-water: Immerse the bowl of the pipe, and blow through it while it is under water, and thousands of bubbles will be formed on the surface. Examine them and you will notice that all are hexagonal. Why is this? It is because the air in each bubble presses in all directions alike, and as each individual cell comes in contact with its surrounding fellows; and all having equal tendency to globular shape, the sides of each are flattened alike, and the tendency of the watery mass to fill all the space occupied by it, brings the bubbles in contact with each other with equal force on all sides. The surface of this mass of bubbles will exactly represent the surface of honey-comb. The side walls of both are "six-sided."

Four-sided and six-sided cells are the only ones that will fill the whole space, and as the effort is for round cells, the hexagon is nearer round than those having four sides; hence the hexagon.

Bees wishing to build round cells, and at the same time occupy all the space, are compelled to build them hexagonal; but it is not because of their wisdom any more than because of the wisdom of soap-suds that the bubbles are hexagonal.

Now in regard to the "three four-sided figures" at the base: I have already shown that the base of a lone or single bubble, is hemispherical. It will be noticed that the tops of all these soap-bubbles are hemispherical. If each would contain more air by being capped over with the material in the shape of "three four-sided figures," then they would naturally assume that shape.

Bees try to make the base or bottom of their cells hemispherical, but as bees on the opposite side of the foundation are building cells in the opposite direction, and using the same material for the base of that set of cells, each set of bees striving for round bottoms, and in different directions, the base of the cells comes in the shape that we find them—with the "three four-sided figures"—not because of the wisdom of the bees, but in spite of them.

Try an experiment with a frame full of foundation. Let the bees work on one side, and shut them away from the other, and you will find where cells are only built on one side of the foundation, all will have the hemisperical base, and the bees will turn out minus that "peculiar wisdom."

Orion,♀ Wis.

Country Gentleman.

Honey-Bees and Horticulture.

W. Z. HUTCHINSON.

It is a well-known fact that sex is not confined to the animal kingdom alone, but extends to the vegetable kingdom as well. The sexual organs of plants and vegetables are located in their blossoms. The majority of plants produce perfect blossoms; that is, blossoms having both stamens and pistils. But we sometimes find blossoms having only stamens, or male organs, others having only pistils, or female organs; and these male and female blossoms may be borne on the same plant or on different plants. Some varieties of strawberries are called pistillates, because their blossoms have only pistils. These strawberries will not bear fruit unless planted near those varieties whose blossoms have stamens.

The squash or pumpkin vine bears both kinds of blossoms on the same stalk. Soon after a squash vine has put forth runners, the blossom buds begin to appear at the junction of the leaf-stalks with the vine. As the buds develop the stems develop also, until they are a little longer than the leaf-stalks. The blossoms now open, and we have large yellow flowers. At the centre of each flower is a yellow cylinder, about an inch in length, covered with fine yellow pollen. These are the male flowers, and, from their structure, can never produce squashes; their office is wholly to supply pollen to fertilize the pistillate blossoms. The first pistillate blossom rarely appears nearer the root than the seventeenth leaf. Instead of having a long stem to support it, this flower opens close down to the junction of the leaf-stalk with the vine. It has a small globular formation beneath it, which is the embryo of the future squash. If the structure of the blossom is examined, it will be found to differ from the tall, male flower, in having the central cylinder divided at the top into several parts. These are what botanists call the pistils, and it is necessary that the fine yellow dust of the male flower should touch them, to fertilize them, that seed may be produced and a squash grow. This may be proved by so confining a blossom that no pollen can gain access to it, when the blossom will wilt, and the embryo squash turn yellow and decay.

When the conditions are most favorable, the flower sends out a fragrance which attracts the bees. Prof. Gray calls this perfume the flowers' advertisement. The bees instinctively read therein that they are welcome to all the exuding nectar they bear away, if they will carry the pollen on their legs and bodies to the pistils. It has been suggested that honey is placed in the flower to attract the bees. After a bee has found honey in one flower it will be very likely to examine others of a similar appearance. In the spring, when the blossoms first open, many of the bees, very likely the young bees that have never before seen a flower, will be seen examining the leaves, branches, and even rough wood of the trunk of a tree, until they find just where the coveted treasure is located. After a bee has dived deep into one blossom and tasted the nectar, it knows where to look the next time. It is plain to be seen that flowers were not given their bright colors simply that we might feast our eyes upon their beauty.

Nature, that most careful economist, not only deals out honey in small doses, but she places it in the most cunning nooks and corners that the bee may be obliged to twist itself into all possible shapes, around and among the stamens, until the pollen is most surely dusted all over its body and legs. Within the flowers of the barberry there is a contrivance by which on the touch of the proboscis of the bee the stamens spring forward suddenly and shower the insect plentifully with pollen with which it may fertilize some other barberry blossom. The flower secretes no honey until the pollen is ripe and ready to do its work; then the honey slowly exudes into the nectaries, so that the bees may be kept coming and licking it out, in every hour of the day, and the flow of honey ceases just as soon as the pollen is ripened and gone. Mr. A. I. Root says: "The Catawba is a very desirable variety of grape, as is also the Delaware; but the former is very small. Dr. Grant originated the Iona, by fertilizing the blossoms of one with the pollen of the other; but, in his first attempt, he failed repeatedly, because the bees were sure to upset all his experiments by their covering the flowers from which he wished to produce the hybrid seed, with lace or something of a similar nature to keep the bees away, he succeeded at once; and we now have the Iona as the result, a grape that is just about half way between the Delaware and Catawba, having very distinctly the flavor of each."

It has very frequently been urged that bees injure fruit and grain by taking honey from the blossoms; and I believe the matter was carried so far in a town in Masachusetts, that an ordinance was passed obliging a bee-keeper to remove his bees to another locality. After a year or two had passed, the fruit-growers decided that they would rather have the bees brought back, because so little fruit set on the trees, in proportion to the number of blossoms that appeared. As it was a fruit-growing district, it was a matter of considerable importance, and the bees were brought back. Of course with the bees came fruit in abundance, for many kinds of fruit absolutely depend upon the agency of bees to fertilize the flowers, thus enabling them to produce fruit. It has been stated that unless we have a few hours of sunshine when early cherries are in bloom, we shall have no cherries at all; and we occasionally have a season when cold rainstorms so prevent the bees from getting out that not a cherry is produced.

While the honey-bee is regarded by the best-informed horticulturists as a friend, a strong prejudice has been excited against it by many fruit-growers, and, in some communities, a man who keeps bees is considered as bad a neighbor as one who allows his poultry to despoil the gardens of others. Even the warmest friends of the bee may be heard lamenting its propensity to banquet on their beautiful peaches and pears, and choicest grapes and plums. But it should be remembered that the jaws of the bee, being adapted chiefly to the manipulation of wax, are too feeble to enable it to readily puncture the skins of even the most delicate grapes. If it were otherwise, whole crops of fruit would be destroyed by bees whenever a period of protracted drouth cut off their supplies of honey. Wasps and hornets, which secrete no wax, being furnished with strong, saw-like jaws, for cutting the woody fibre with which they build their combs, can easily penetrate the skin of the toughest fruits. After the mischief has been begun by other insects, or wherever a crack or a spot of decay is seen, the honey-bee hastens to help itself. In this way they undoubtedly do some mischief; but before war is declared against them, let every fruit-grower inquire if, on the whole, they are not more useful than injurious. If the horticulturists who regard the bee as an enemy, could exterminate the race, they would act with as little wisdom as those who attempt to banish from their inhospitable premises every insectivorous bird, which helps itself to a small part of the abundance it has aided in preserving.

Rogersville, δ Mich.

For the American Bee Journal.

Building Drone-Comb, etc.

MRS. MAHALA B. CHADDOCK.

The following letter of inquiry was sent me by the editor of the AMERICAN BEE JOURNAL, with the request that I reply to it:

"I see that Mrs. Chaddock has been hiving bees in empty hives and getting a 'splendid lot of drone-comb.' Will she please give the particulars? How many frames were given? What was the size of the frames? Were the bees admitted to the surplus apartment at the time of hiving? Were the queens old or young? Were —well, anything else she can think of."—W. Z. Hutchinson, Rogersville, Mich.

I used Simplicity hives; hived the bees on 6 frames, one containing brood, the others empty; no starters. I shut them in with division-boards, and put propolized muslin over the empty spaces to keep the bees from going down from the sections. I have no honey-boards. I put on a honey-box that belongs on the Gallup hives, because the section-cases that I have for the Simplicity hive do not tier up. This honey-box holds from 33⅓ to 38 pounds of honey when filled. It was filled with foundation in two-pound sections. On top of this honey-box I put the section-case that had been on the colony before it swarmed. It was half full of honey. I hived 6 swarms in this way, the only difference being that some of the top-cases were fuller of honey than others.

One of the queens was one year old, two of them were two years old, and the other three were three years old. The bees would not stay in the hive, but clustered all the time on the outside. Some of them worked, however, for they carried in honey very fast. After they had been hived two or three days, I examined them. The one-year-old queen had *all* worker-comb; the two-year-olds had about half worker-comb, and the three-year-olds had *all* drone-comb. I took out the division-boards, put another Simplicity hive with 10 empty frames on top of the brood-nest, the sections on top, and they all went to work.

Of course I know that as soon as I took out the division-boards and gave them the whole Simplicity hive for a brood-nest, and then doubled the capacity of that, that there was no "Hutchinson" about it any more. It was Chaddock's idea to give them all the room she could find, and let them build drone-comb to their heart's content.

I know that Mr. Hutchinson will say that I did not give them room enough in the sections. I think if I had put on *ten* section cases, all the bees would have worked; but whether it would have made a difference in the drone-combs I cannot say. In two days after I gave them the "big room," they built nothing but worker-comb. After that I hived the rest without contracting the brood-nest, and one swarm containing a queen a year old, built no drone-comb, while the colonies with old queens built all drone-combs for four or five days, then worker-comb. I took out all the drone-combs from the brood-nest, and gave them to my "crazy" bees, replacing with foundation that had been partly drawn out in other colonies.

I have about 250 pounds of this drone-comb full of as nice white clover honey as man ever ate; and as Mr. Chaddock is always fearful that we will run out of honey, I have dedicated the whole lot to family use. I believe I rather like the idea of having honey in these big slices, instead of prying out sections when we want to eat the honey.

Vermont, Ills.

P. S.—The bees were given free access to the sections before they were all in the hive.—M. B. C.

For the American Bee Journal.

Taxing Colonies of Bees.

DR. E. B. SOUTHWICK.

I notice that the question, "Are bees taxable?" is gaining in notoriety, and as I am the only one who has said that they are not taxable without a special law to that effect, it becomes necessary to give some reasons why they are not taxed and should not be. I will give the following four reasons why they are not and should not be taxed:

1. They are wild and cannot be tamed. 2. They are a public benefit. 3. They are teachers of industry and frugality, and by the practice of the same save millions of wealth to the world. 4. They are not protected by law, but are liable to be destroyed when they can be without trespassing.

First, bees are wild and cannot be tamed. It is well known that a swarm of bees coming out of a tree in the woods can be hived and controlled just as well as though they came out of a hive in the apiary (convenience for handling being the same). They can be taken into a parlor, put in the bay-window, given a chance to get out and in, and they will work and defend their home, sting the passers by, if they come too close, and do in every respect as they did in the woods; and when that colony sends out a swarm, and it goes to the woods, that swarm will do just as its parent colony did when it was in the woods, and show thereby that its nature has not been changed by its sojourn in the domestic circle.

It is well known to all handlers of bees, that bees act and can be handled just the same (convenience considered) in the woods as in the apiary. If they are wild in the woods, they are wild in the apiary. If they are ever wild they are always wild. This is settled by the California judge's charge, where he states that the owner can have only a qualified interest in bees. That they are always classed as qualified property cannot be disputed, and if taxable in the apiary they are taxable in the woods also. The thing to be decided is, is qualified property taxable?

Second, they are public benefactors. It is said that "he who makes two spears of grass grow where only one grew before, is a public benefactor." Do not bees, by conveying the fructifying dust from one flower to another, fertilize them so that not only two grow where one did, but makes many grow where none would have been had it not been for them. Botanists, I believe, agree that fruit and seed are greatly increased by bees flying from flower to flower. If the man, who sued for damages that the bees did his sheep, had been a scientific man, he would have known that the bees were doing him a vast amount more good than harm. Thus the "little busy bee" flies from flower to flower, taking from one its surplus, and leaving with others what they lack; thereby equalizing the life-producing dust, making all productive, and so doing good to all and harm to none. Should they be taxed, considering the great benefit they are to the people, when millions are exempt that are piled up in grand edifices for no other purpose than for the aristocrat, the monopolists, the grinder of the poor, the robbers of honest toil, to meet in and display their ill-gotten wealth, and chuckle over the poor honest people they are abusing? I say no!

Third, they are teachers of industry and frugality; not as is taught in the pulpit by precept, but by that nobler and more impressive way—by example. In the working season they are always busy. In the daytime they are prospecting over the country seeking and saving every little particle of sweet that would without them be totally lost, and in the still hours of midnight you can hear the continued buzz of their industry. They save thousands of dollars worth of wealth that would be entirely lost were it not for them. We can say of them what we cannot say of many men and women, viz: The world is better for their being in it.

The man who brings bees into a country greatly benefits that country. He saves for them what they cannot save, and places before them a healthy article of food or luxury. In short, he is a public benefactor.

We exempt our school-houses because they assist education, and education is a public good. But a man pays his money for his education which enables him to earn much more than he could without it; ought he to be taxed for it? He gives to others without lessening his own, but rather increases his own and benefits all. So with bees; they gather from the flowers' wealth without lessening their value and usefulness, but, on the contrary, they increase them. If a man should be taxed for his bees, the educated man should be taxed for his education.

Fourth, bees are not protected by law. If they are killed away from home the owner has no redress, any more than he has if his tamed wild turkeys are killed away from home. Michigan offers a premium on the using of wide-tire wagons because they benefit the roads. They ought to offer a premium on bees for the good they do in increasing the production of the country and saving its choicest sweets, which produce wealth, health and happiness for all.

Tax your saloons, your liquor-makers, your olemargarine manufactors, your tobacco-mongers, your gamblers of all classes and kinds; your high-steepled edifices where the rich congregate, not to worship God, but to exhibit their finery, their diamonds and their silks, gotten by wrongs inflicted on the working class—the only real wealth-producers outside of nature in the country; and tax all other nuisances—tax them heavily; but let the little, innocent, industrious, frugal, honey-saving, children-pleasing honey-bees go free.

Sherman, Mich.

For the American Bee Journal.

Wintering Bees, Hiving Swarms, etc.

GEO. A. WRIGHT.

On page 411, Mr. W. Z. Hutchinson claims that "when bees are undisturbed by man's reason, they meet an untimely fate;" and so they do when disturbed by man's reason. My father kept quite a large number of colonies of bees in large box-hives, up to the time of his death, four years ago, and he rarely lost any "when left to their own sweet will;" but when he began to put on boxes, and take all of the early honey, and then compel the bees to live on pollen and poor honey, then they began to die. If Mr. H. were here I could take him to a man that hives his bees in large box-hives, and "leaves them to their own sweet will," and when all of the rest of us have lost heavily this man has passed winter after winter without the loss of a single colony.

I can winter bees just as well on early, well-ripened honey as I can on sugar. When the bees have gathered no honey, and we are obliged to feed or let them die, it may be all right to feed sugar; but as long as we feed sugar we may expect to be accused of adulteration.

I notice that some are having trouble in trying to get the bees to build worker-comb. With me this season it has worked like a charm. I hive my swarms on from 5 to 7 frames; the frames are spaced 1¼ inches from centre to centre. If they are put farther than this they are sure to build drone-comb. I look through the hives four days after hiving, and if drone-comb is started I cut it out, and they usually give no trouble after that. Some colonies built their five frames full of worker-comb without being touched.

I put the boxes on when I hive the swarm. Where this is done a queen-excluder is needed. I had no queen-excluder, and 3 or 4 queens entered the boxes and filled a few of the sections with brood.

This has been the poorest honey season, so far, that I have seen in 15 years. Basswood is in full bloom, and not a drop of honey is being put into the boxes. Some colonies are actually going backward.

Glenwood,δ Pa., July 13, 1886.

For the American Bee Journal.

Feeding Sugar to Bees.

H. E. HILL.

In answer to Mr. Hutchinson, on page 329, where he so courteously replies to my letter on the above subject, I would say that for the very reason that Mr. H. "would consider it wisdom to feed sugar," the ones of whom I wrote would give as a reason, if they were asked, why they did not feed also. But they would be sure to add, "And I want to keep it so." For in most instances it is attributable to the fact that such carry on the business independent of any inferior foreign substance; that the price of honey remains above that of sugar according to its comparative value in their local market; and the profit to be derived by extracting the honey and substituting sugar for winter would be so meagre, compared with the loss of bringing honey down to a level with that of sugar, that they do not care to enter into any such speculation.

No, Mr. Hutchinson, we do not "expect such a sacrifice on the part of our less fortunate brothers;" "simply because it *may* assist in giving color to an *unjust* accusation." But in the face of the fact that sugar feeding *has* and still *is* lessening the sales and lowering the price of honey, is it better that the few (comparatively) bee-keepers who cannot winter their bees on their natural food, should sacrifice their gain by the practice? or that the future prosperity of the honey-producing community should be sacrificed?

I agree with Mr. Geo. A. Wright, in *Gleanings* for Feb. 1, when he says that "sugar feeding, or bee-keeping, has got to go down." Nothing will put "bee-keeping down" so quickly as putting down the price of honey. It is for the price of the honey that bees are kept, and the fact that bee-keepers are now using hundreds of barrels of sugar annually *has* put down the price, and the demand for honey.

To those that wonder "if it is really necessary to feed sugar to insure safe wintering," just recall America's most successful apiarists—those who for many years have lost no bees, practically; those who produce the greatest amount of honey, etc. (Do not hastily conclude that because a man is a popular apiarian writer, that he is a successful apiarist.) Then find out how many of these gentlemen feed sugar; and draw your own conclusions.

If bees are getting so "high-toned" during the past few years, over the modern system of apiculture, that honey is not good enough for them, what will we have to feed in ten years from now, if the present rate of progress continues? If this is not the reason, let some one who knows, tell us who has fed cane-sugar since the foundation of the world, in order to keep the race extant, and even increasing at a rate that seems to compare favorably with that of all other animated creation?

Mr. Hutchinson asks: "Did bees never perish when left to their own sweet will?" This granted; is there not twice as many bees wintered successfully on their natural food as there is on sugar? I should imagine there would be more "amusement" in listening to the incredible theorizing argument of those opposed to sugar-feeding, than there is in hearing a dealer say in the presence of a shopful of customers, that "since these big bee-keepers make their honey out of sugar, there is no sale for it;" and receive in exchange for an explanation, the sincere sympathy of all present, for your exhibition of ignorance, when "everybody knows that you cannot get pure honey any more." But "the innocent must suffer with the guilty."

Titusville,~o Pa.

For the American Bee Journal.

Prevention of Bee-Diarrhea.

E. GALLUP.

Here is a question that I have been asked repeatedly, "How do you manage your bees when they get the diarrhea?" or, "What do you do for your bees when they have the diarrhea?"

Well, my friends, my bees do not have the diarrhea; and, in fact, I have come to the conclusion that there is no such disease. Here, methinks, I hear friend Pucket say, "That is some more of Gallup's buncom!" And I hear others say, "My bees certainly had the diarrhea." Well, mine, too, used to have it, or what is called so, some 25 or 30 years ago, but they know better now. But let me explain: It is a condition of the colony, or of the hive, and not a disease.

I have found a colony in the spring, in a hollow tree, with the entrance at the top of the cavity or hollow; and when they first flew out in the spring, they did not so much as speck the snow. On the other hand, a colony at the bottom of the hollow, will discharge large quantities of feces on their first flight. This is in their natural state.

When bees are kept in cellars or a special repository, a large or strong colony, if not properly ventilated, will be too warm, and consume large quantities of honey, more than can be evaporated by insensible perspiration. These will have the diarrhea, and will, in all probability consume all their stores and starve before spring. The remedy in this case is to take off all of the honey-boards, and if they are not then quiet, raise the hive at the bottom by degrees until they become quiet. What I mean by a very strong colony, is such a colony as Novice would have from a two-story hive on reducing it to one-story in the fall. It is best in such a case to take out one or two combs from the sides of the hive and move the remainder further apart, so as to give more room for the bees between the combs. On the other hand, when we have a small colony that occupies just two or three ranges of combs in my hive (a nucleus, if you please, in which we are wintering a spare queen), we will say we have them in the right hand side of the hive, we move the hive to the right or the bottom-board, so as to close the lower entrance. The division-board must be adjusted to suit the number of combs; and the piece of honey-board over the bees can either be moved a trifle or raised; and your nucleus or small colony will winter exactly as well as the large one. The small colony will not consume any more honey in proportion to the number of bees, than a large one. But should you attempt to winter such a small colony in a large hive, they would consume more honey in proportion to the number of bees, and in all probability have the diarrhea.

The bees of a small colony with too much ventilation, will, on you going into the cellar with a light, come out and discharge on the outside of the hive. Give less ventilation, and the remedy is applied at once. A late colony that has thin, watery honey will have the diarrhea. To prevent this, give it in the fall some combs from an old colony containing good honey; and give them the thin honey in the spring, when the bees can fly out.

I wish to be understood on this subject of wintering, ventilation, etc., because it is of great importance to know that bees can be wintered without consuming much honey. Walk down into my cellar and see the bees, it will take but a few minutes. Step up and look at them by the light of the lamp. Do you see the striped fellows in this hive? "Yes, but Gallup, they are dead as a door-nail." Not a bit of it. "Well, they don't stir." Let us breathe on them a trifle. "They are alive; that is a fact. Do they keep as quiet as that all winter?" Certainly. And that is not all; they scarcely consume any honey all winter. "Well, Gallup, I do not want to tell you that you lie, but I do not believe a word of it." "Well, sir, your disbelief does not alter the fact one particle." "Why, Gallup, here is your pork, potatoes, and other vegetables; your women must come down here two or three times a day with a light. Don't the bees come out?" Do they come out now? "They do not appear to, that's a fact. Why, Gallup, I always supposed that bees, when kept in a cellar, had to be fastened in with a straw mat, patent bee-preserver, or something of that sort." Well, you see that mine are kept in with a little common sense, do you not? "Yes, but I can hardly understand it." That is because you do not believe your own eyes.

Reader, scarcely a week passes all winter without some such conversation as the above on this subject. If I had only 10 colonies of bees, and never calculated to keep any more than that number, and had no cellar, I would build a place on purpose to winter them in, and save honey enough every year to pay the expense.

Osage, Iowa.

[The above article is republished from Vol. IV of the BEE JOURNAL, page 145, as requested by Mr. G. M. Doolittle on page 215.—ED.]

Local Convention Directory.

1886. *Time and place of Meeting.*

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12–14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Little Fall Bloom Expected.—J. F. Hays, Macomb,⊸ Ills., on July 22, 1886, says:

I have 130 colonies at present all in first-class condition. The bees can do nothing as present, as the clover is dead and dry, and there is but little prospect of much fall bloom. I cannot get along without the BEE JOURNAL.

Kerosene Oil for Bee-Stings, etc.—11—M. L. Spencer, (77—120), Little Genesee,♀ N. Y., on July 21, 1886, writes:

In respect to Query, No. 297, about ants, I would say that our common kerosene oil, the kind burned in lamps, will kill them, eggs and all; every one that it once covers is defunct. A few drops on the hives, or in the cracks of the hive will keep the ants away. I also use it for bee-stings. I extract the sting in the usual way, by scraping, and put a few drops of oil on the wound, and work some into the same. It kills the pain and prevents the swelling. I think the acid left in the oil from refining kills the poison. Although the sting does not swell, on me as formerly, I believe the pain is as bad as ever, if I use nothing for relief. I keep the oil in a small, spring-bottom can (sewing-machine size), and it can be injected into cracks and crevices of the hives. I never saw bees bring such loads of pollen as they got from sumac, and at that time I had quite a lot of white comb about capped, but not sufficiently capped to take off, and consequently I have a lot of sections nicely yellowed from the pollen. They are not stained as are those left on too long, that is, darkened, but yellowed. I think our season, so far, is the poorest in years. We have had very cold nights and dry weather.

More Honey-Dew.—C. Theilmann, Theilmanton,⚲ Minn., writes:

I send another sample of louse-secretion or honey-dew, by this mail. It is so great and distinct that the dew even runs off the leaves at the lower ends; also the lice are there on the under side of the leaves, and have, it seems, extracted honey on the same side they were on last night, while the leaves were lying (the same as packed) on the window-casing. These milk-weeds stood on a clear place away from trees, in my pasture. The corn-leaf enclosed, which has honey-dew on it also, was under an oak-tree. I could not discover any honey-dew elsewhere on the corn in the open air in the field. The woods is full of honey-dew, every brush and weed is covered thickly with it; the leaves on the trees are getting crippled, and have many dry spots. I could not discover any scale or bark lice anywhere, and have examined closely, but the corn-leaf seems to be evidence of them. Will Prof. Cook please explain to us fully, through the AMERICAN BEE JOURNAL, his conclusion.

[I can hardly come to any very satisfactory conclusion. The milk-weed is loaded with nectar and thickly covered with lice, which are unquestionably the source of the sweet liquid. Corn has often been referred to as yielding abundance of honey. It may be that corn does, at times, yield honey from extra floral glands. In this case the nectar may have come from the overhanging oaks. This very dry year is remarkable for the numerous lice, and wherever the lice are, there the nectar may be looked for.—A. J. COOK.]

Spring Use of the Reversible Hive.—Mark Thomson, Canton,♂ Ohio, on July 19, 1886, writes:

Since apple bloom the honey-flow has been continuous, and colonies properly managed, have done remarkably well. Swarms hived on foundation in the new Heddon hive have given a surplus of 50 pounds to the colony. The most of those that I know who use this hive are well pleased with it thus far. The question that comes to most is, can we build up in the spring with this hive as easily as with the Langstroth or Quinby?

Injustice to Honey-Producers.—W. Mason, Fillmore,⊸ Ind., says:

I am much pleased with the pluck you displayed in reply to Dr. Kellogg's article of injustice to the honest honey-producer. It is very unjust to make such charges in such general terms. I admit that fraudulent honey may be found in the markets by manufacturers of shoddy honey, just as the olemargarine butter gets there; but the honest honey-producer should not be responsible for this dishonesty practiced by scoundrels, and I suggest that every producer of honest honey should label his honey with a guarantee, stamped on it in such a way as to remove all doubts, and if he is not willing to do that then let him fall. In this way we can protect our business, or else ask Congress to do so for us, as in the butter trade.

Appreciating the "Union."—Mrs. H. Hills, Sheboygan Falls,⟜ Wis., writes:

MR. NEWMAN:—Permit me to thank you for your very kind and courteous letter in answer to my appeal to you in regard to my local honey market, etc. I would like, also, to express my high appreciation of what is being done by the "Bee-Keepers' Union." I should hardly have dared to presume to ask for your advice, in the matter above referred to, but for that Society. Your ready sympathy, and kind answer, amply repay me for what I have paid to the "Union." I cannot conceive why other bee-keepers do not avail themselves of the privilege of becoming members.

[It is exceedingly surprising that so few seem to appreciate the splendid work being accomplished by the Union for the pursuit of bee-keeping. There ought to be at least ten thousand members now instead of only a few hundreds.—ED.]

Unprecedented Drouth.—James Heddon, Dowagiac,♀ Mich., on July 21, 1886, says:

The drouth here is unprecedented. I fear we shall have no fall honey at all, if rain does not soon come to our relief. Farm crops are all drying up. On several occasions the sun has lifted millions of caldrons of water from the bosom of old Lake Michigan, and cruelly poured it back into the lake, and right before the eyes of suffering humanity. I have only about 25,000 pounds of clover and basswood extracted honey from 250 colonies (after spring sales), for basswood gave us less than one-half an average yield. My comb honey will nearly all come from the new hives, and amounts to only two or three thousand pounds. I had but 10 swarms throughout, but have doubled my colonies by dividing them. Nearly all of New England reports "total failure;" much the same comes from many other localities. I think that the general crop is very short, and that prices will rule firm.

Basswood a Failure.—D. H. Coggshall, Jr., West Groton,⊙ N. Y., on July 16, 1886, writes:

We are getting no honey here as a surplus. Basswood is almost a total failure, there being but little in bloom. We think that there is an insect that works in the bloom, and then there are but few trees that have any buds on them. Buckwheat is our only hope for a surplus from this section, which blooms about Aug. 1.

Bees Have Done Well.—D. D. Herrick, Libertyville,♂ Ills., on July 20, 1886, says:

We have had a very dry time for the last four weeks, but we are getting a nice shower now. My bees have done much better than I had any idea they would, for we have had cool, damp nights for the most of the time. I have seen the bees laying out on the hives only two nights this summer. Some of my first swarms have stored from 40 to 50 pounds of surplus, and one as high as 75 pounds. I think that good enough.

Few Swarms and Little Honey.—O. L. Hershiser, Water Valley,⟜ N. Y., on July 20, 1886, says:

For the last 2 or 3 days bees in this locality have been very busily at work on the foliage of the basswood, and on red clover. Upon examination I found great numbers of plant-lice on the under side of the leaves, and in the case of the clover, there were many fine globules of a sweetish substance secreted on the under side of the leaves, which the bees are gathering with great vigor. The bees work on the upper surface of basswood leaves, but the lice are on the under side. This is, I suppose, the honey-dew which we have read of in bee-papers and bee-books. Bees in this immediate locality have done very poorly this season. The drouth cut short the white clover crop, and cool weather through April held the bees back so that but few swarms issued. In our own apiary of over 100 colonies we have not had over a half-dozen natural swarms, and other apiaries in this vicinity have had none. The hives are very populous now, and I fear a swarming-time during buckwheat bloom. Basswood bloomed very sparsely in this locality—not more than one-fourth of the trees having any bloom whatever. Those trees that did bloom did not secrete honey to any great extent; many of the honey-glands in the blossoms were perfectly dry, while in a few a mere trace could be seen. Although our honey crop is short in this locality, and increase almost nothing, I am informed that the shortage is only local, and that less than 20 miles northeast of here they have had many swarms, and a good flow of honey. A few specimens of the Chapman honey-plant, which we are testing at this place, are in bloom, and it seems to be full of honey: from two to six bees on a head of bloom all the time; there seems to be no limit to the flow of nectar.

Much Swarming.—W. F. Clarke, Guelph, Ont., on July 20, 1886, writes:

I am now writing under the shade of a magnificent Northern Spy apple tree, beneath which I have a rustic seat and a table, where I have spent many happy hours listening to the hum of the bees, watching them at work, and weaving theories about them, since swarming began. I never had such a time in my life, owing to the bees swarming without notice. Usually they hang out for a day or two or several days—this season there has not been a solitary outside cluster in my apiary. My first swarm came off very early—May 19—just as I was going down town to the postoffice, about 11 a.m. I had noticed that the hive was getting very populous, but never dreamed of the colony swarming. From that day I have kept close watch, and not a colony that has swarmed has hung out the usual signs and portents. The bees have come out with a rush, as on the spur of the moment, and I have had the most provokingly *small* swarms; little clusters that had no business to start house-keeping on their own account. Why is this thusly? Is it a peculiarity of the season, or is our contracting method belittling the swarms? I have some fears that what with our division-boards and dividing colonies we are getting the bees into a confused condition. Are they bound to swarm anyhow, do as we may, and will they go off in handfuls if they cannot go more numerously? I have had only one decent, old-fashioned, ¾-of-a-bushel swarm this year, and a disgusting lot of little quart clusters, that will barely get enough stores for wintering, let alone giving me anything for my care and trouble with them.

Bee-Sting Remedies, etc.—B. Novis, Blauveltville,○ N. Y., on July 16, 1886, writes:

The other day a horse was stung to death by bees, at Arcola, N. J. At first one bee stung the animal, which made a spring into the air and landed upon a stand on which were several hives. In a moment the horse was literally covered with bees, and despite the efforts of his owner to rescue it, he died in one hour. The owner was stung so severely as to need medical treatment. There is no doubt, I believe, that the recipes for bee-stings, published from time to time in the BEE JOURNAL, have cured those by whom they have been recommended, but they (particularly ammonia) have no more effect on me than so much water. It must be that the remedies have different effects on different systems. Perhaps some will find the following as sure a cure as I have: Dissolve a table-spoonful of salt in a half-goblet of vinegar, and make it tepid; apply to the sting with a rag. Since using this remedy a bee-sting has lost all its terrors to me. A lady told me, the other day, that an onion cut in halves and rubbed on the sting was a sure cure. I shall try it the next time I get stung.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and a Voting Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Voting Blank.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
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PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

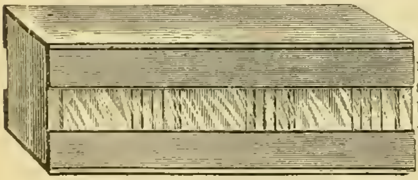
To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¼c. per light, extra.



◆

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00. Orders filled **at once.**

◆

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at **$6.00** each.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

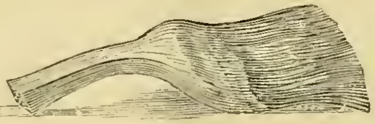
☞ Our stock of Simmins' pamphlet on Swarming is exhausted, with several orders unfilled. We have more on the way, and as soon as they come all orders on hand will be filled.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable.



When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen

◆

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "It is not convenient for me to send the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 26, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—It is coming on the market very freely this week, and there are advices of other lots at this time in transit. We are practically without any demand, so prices are nominal. Offers of 2@13c. would be accepted; yet 14c. is being asked.

BEESWAX.—Scarce at 25c.

R. A. BURNETT, 161 South Water st.

NEW YORK.

HONEY.—The present quotations are as follows: Fancy white comb in 1-lb. sections, 10@12c.; fancy white comb in 2-lb. sections, 8@10c; buckwheat in 1 and 2-lb. sections, 5@8c; extracted white clover, 6c; extracted, California, 4½@5c; extracted, Southern, per gallon, 45 to 55c.

BEESWAX.—23 to 28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—New honey is coming in quite freely, and is bringing from 11 to 13c.

BEESWAX.—Firm, at 25 cts. per pound.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI

HONEY.—The demand for extracted honey has been very light of late, but it seems to be improving gradually for manufacturing purposes. There is considerable honey in the hands of commission merchants, and prices are very low—3½ to 7 cts. per pound is the range of prices. Prices of comb honey are nominal.

BEESWAX.—Arrivals are good and the demand fair. We pay 18@22c. for fair to choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The receipts of new honey are good and very fine. The demand is good and stocks in store are light of one-pound sections. We quote: 1-lb. sections of white clover, 14@15c.; 1-lbs., dark, 11@12c.; 2-lbs., white clover, 11@12c.; 2-lbs., dark, 8@9c.; California white 2-lbs., 10@11c.; dark, 8@9c Extracted white clover, 5@6c., dark, 3½@4c.; California white, 4½@5c.; dark, 3½@4c.

BEESWAX.—20 to 22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is fairly supplied with honey, trade is dull, prices depressed, and the outlook is for a large production. Already some is being peddled about the city by the producers themselves, demoralizing the prices, which should not be done. We quote: Choice white in 1-pound sections, 14@15c.; 2-lbs. 13@15c. Dark honey not wanted. Extracted, white, in barrels and kegs, 5@7c.; in tin cans, 6@8c.; dark in barrels or kegs, 4@6.

BEESWAX.—25c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The prices of honey on this coast are now so low that producers can hardly make any profit, and a good many apiarists will quit the business if prices do not improve soon. The crop is large, and the quality of very choice quality. We quote 3½ to 4¼c. in a jobbing way, and perhaps a trifle more; but if holders wish to force sales, lower prices must be taken. Comb honey sells slowly at 6 to 9c., but just now it is not the season for comb honey, and prices may improve.

BEESWAX.—Is generally held at 22 to 23c. for average. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—New honey is coming forward freely. The quality is exceptionally fine and the crop will be large. White to extra white comb, 9@11c. Extracted, 4@4½c. for white; 3½@3¾c. for amber.

BEESWAX.—22@23c.

O. B. SMITH & CO., 423 Front Street.

ST. LOUIS

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c. Fermented goods, 2½@3c.

BEESWAX.—Firm at 21½c for prime.

D. G. TUTT & CO., Commercial St.

Convention Notices.

☞ The Cortland Union Bee-Keepers' Association will hold a basket picnic at Little York, N. Y., on Wednesday, Aug. 18, 1886. All interested in bee-culture, with their families, are cordially invited to attend and have a good time.
D. T. Shattuck, *Sec.*, Homer, N. Y.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.
J. M. Hambaugh, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. Cutting, *Sec.*

☞ The next meeting of the Stark County Bee-Keepers' Society will be held in Grange Hall, at Canton, O., on Aug. 31, 1886.
Mark Thomson, *Sec.*

◆

Frank Leslie's Sunday Magazine for August contains many beautiful pictures, and the usual complement of short articles and poems. Kilma-Njaro, the recently-discovered monarch of African Mountains, is the subject of the opening paper in this inimitable number.

◆

"Cash in Advance" is the rule, but no longer than six months of grace can be allowed on the small sum of one dollar. Subscriptions may commence at any time, and discontinuances may be ordered at any time when arrearages are paid up.

◆

The Convention History of America and the American Bee Journal for one year, will be clubbed for $1.15.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

◆

Our Catalogue of Bee-Keepers' Supplies will be sent to any one desiring to get a copy. Send name and address, plainly written, on a Postal Card for it.

Advertisements.

WILL sell 400 full Colonies of Bees in lots to suit buyer ; or will sell Apiaries already stocked up. **Now is your time.**
Address, **H. R. BOARDMAN,**
28Atf EA. TOWNSEND, Huron Co., O.

COLONIES of Italian Bees in 10-frame hives at $5.00 ; Tested Queens at $1.25 ; Untested Queens at 75 cts.; 2-frame Nucleus (no queen), $1.50 ; three-frame Nucleus (no queen), $2.00. Address, **OTTO KLEINOW,**
(Opp. Ft. Wayne Gate), DETROIT. MICH.
28Atf

ROOT'S Simplicity and CHAFF HIVES, Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand.
Address, **E. R. NEWCOMB,**
PLEASANT VALLEY, Dutchess Co., N. Y.
27A8t

FINE Tested Italian Queens of this year's breeding, for $1 each ; Untested Queens only 65 cts. each, by return mail. Hives and Sections at rock-bottom prices.
B. J. MILLER & CO., Nappanee, Ind.
29Atf

I CAN use a few thousand pounds of Extracted Honey of good quality, if cheap. Address,

H. R. BOARDMAN,
28Atf EA. TOWNSEND, Huron co., O.

A Year among the Bes,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

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923 & 925 West Madison St., CHICAGO, ILL.

TWO HUNDRED

Select Tested Italian Queens!

Large, Handsome and Extra-Prolific Queens

$1.50 Each, or Three for $4.00,

By return mail. Safe arrival guaranteed. Make Money Orders or Postal Notes payable at Salem, Mass. Address, **HENRY ALLEY,**
29Atf WENHAM, MASS.

BEE-KEEPERS' GUIDE;

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

HUMPHREYS' HOMEOPATHIC SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5. Sold by Druggists, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.

DOUBLE-WALLED

Langstroth Hives

FOR WINTERING BEES ON SUMMER STANDS.

THEY are made identical and interchangeable with our Standard Langstroth Hives, as advertised and described in our Catalogue. All upper stories and surplus arrangements made by us will fit this double-walled brood chamber. Prices: Nailed, **50c.**; in the flat, **35c.** per hive, in addition to our prices of the Standard Langstroth. We also make our 7½-inch Caps with a sloping or Cottage Roof, which is worth **20c.** nailed and **15c.** flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

THOS. G. NEWMAN & SON,
923 & 925 West Madison-st., Chicago, Ills.

Sections and Berry-Baskets.

WE, the *original inventors* of the one-piece Sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
28A4t MILTON, Trimble Co., KY.

ITALIAN QUEENS, by Return Mail, Tested, 1.00. Untested, 75 cents.
26Atf **GEO. STUCKMAN, Nappanee, Ind.**

Italian and Carniolan Queens

BY RETURN MAIL.

BRED in separate apiaries away from other bees. Warranted Italian or untested Carniolan Queens, in June, $1.10 ; 6, $5.90 ; in July, $1 ; 6, $5. State which you prefer, **Bellinzona** or **Golden Italians.** For full particulars and prices of Bees, send for Circular. *Satisfaction guaranteed.*

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I WILL furnish **Warranted Italian Queen-Bees** for $1.00 each ; Tested Queens for $2.00 each. Delivered by mail.
PETER BRICKEY, Lawrenceburg, Ky.
18E10t

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FOR Early Italian Queens, Nuclei and Full Colonies ; the manufacture of **Hives, Sections, Frames, Feeders, Foundation, etc.,** a specialty. Superior work and best material at "let-live" prices. Steam Factory fully equipped with the latest and most approved machinery Send for Illustrated Catalogue. Address,

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is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows : Single Queen, $1.00 : 6 Queens for $5.00 ; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound), Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.

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1-lb., all-in-one-piece,	40c per lb. for heavy.
V-Groove, $4 per 1,000	50c " " light.
Less for lots of 10,000	Send for Samples and Price-List.

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JAMES WOOD, North Prescott, Mass.
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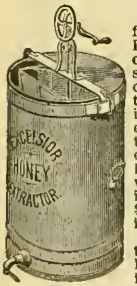
April 15, 1886. 16Wtf

EXCELSIOR HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	13x20	"	12 00
For 4 " "	13x20	"	16 00

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923 & 925 West Madison Street, CHICAGO, ILL.

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The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

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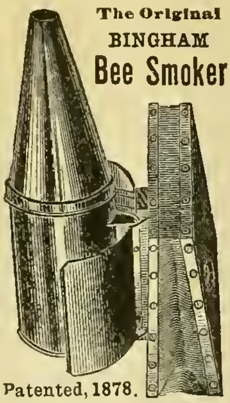
Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf J. VANDERVORT, Laceyville, Pa.

The Original BINGHAM Bee Smoker



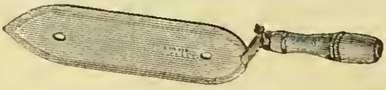
Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years.
E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet.
F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last, I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½	inch	$2 00
Conqueror smoker (wide shield)	3	"	1 75
Large smoker (wide shield)	2½	"	1 50
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Little Wonder smoker	1¾	"	65
Bingham & Hetherington Honey Knife, 2 inch			1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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DR. FOOTE'S HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping Bathing, Working, etc.

IT TELLS ABOUT

What to Eat,
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Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear
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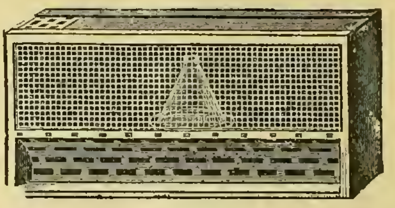
Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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MANUFACTORY
FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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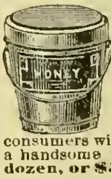
NEW ONE-POUND HONEY PAIL.



THIS **new size** of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

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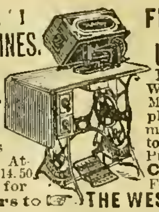
SEWING MACHINES.
100,000
Newest and Best.



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THE AMERICAN APICULTURIST

SENT one year, and a **Tested Italian Queen**, to each subscriber—all for $1.50. Sample copies free. Address,
30Atf HENRY ALLEY, Wenham, Mass.

Vandervort Foundation Mill.

6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Aug. 4, 1886. No. 31.

Once, amid the roses bright,
Ruby red, *honey* sweet—
You and I, in laughing weather,
Sung a lay of love together;
Petals falling on our feet.
When shall summer be so light?
Never more!
Oh, never more!

◆

N. W. McLain A. I. Root and L. C. Root were appointed a committee by the Detroit Convention to investigate the Chapman Honey-Plant. They are now engaged in that work, Mr. McLain having gone East for the purpose of meeting Mr. Root, and together making the investigation. In due time their report will appear in our columns.

◆

The Annual Show of the Royal Agricultural Society of England, was held at Norwich last month, and we notice that Messrs. George Neighbour & Son, of London, England, carried off the first and third prizes on hives for all purposes; first prize for Cottager's hive, and the first prize for the best collection of hives and implements for bee-keepers. We congratulate them on the success they so richly deserve.

◆

The Hancock County Fair will be held at Greenfield, Ind., on Aug. 24 to 27, 1886. Those interested should send to the secretary, Charles Downing, Greenfield, Ind., for a copy of the Premium List. The premiums for bees and honey amount to $32, besides diplomas and a queen offered by George Cole for the best display of honey from one colony.

◆

Toads are sometimes very annoying in the apiary. A correspondent mentions the fact that upon going to the hives one morning during the late drought, he noticed a toad at the entrance of each hive. He says that the toads were apparently asleep, but every time a bee approached, the tongue of the toad would shoot out like lightning and convey the unsuspecting insect into its capacious mouth.

Why is it Mysterious?—From Mr. H. Banks, Reisterstown, Md., we have received the following item taken from the Port Tobacco, Md., *Independent*:

> A correspondent from White Plains writes that several persons in that vicinity were poisoned not long since by eating honey taken out of a box in a bee-hive, whereas that taken out of the adjoining hives was absolutely pure and harmless, as is known by its being eaten by two or more that were poisoned by the other. The effect produced was that of an indescribable burning and alternately chilly sensation, with nausea, vomiting and great prostration of vital forces. The persons thus affected were Mrs. George R. Roby and daughter, Mr. John Murray (ex-sheriff), Mrs. J. T. Davis and Mr. Wm. Davis, to whom Dr. P. W. Hawkins administered, to neutralize the venom that was received into the system, whatever that was. The whole affair seems to be involved in mystery.

Mr. Banks asks, "Can you fathom the mystery?" In the human mind there seems to be a great passion for the mysterious! If anything is in the least strange, it is at once set down as a mystery! But we can see nothing of the kind in the above item.

We are well aware that such a good authority as Prof. A. J. Cook claims that there is no such a thing as "poisonous honey"—but we are compelled to dissent from that view. Xenophon, the Greek historian and general, tells us that his soldiers were poisoned by eating the honey of Trebizond, and that it produced the effect of a temporary insanity. In 1704, Tournefort, the great French botanist, found that the honey made from the *Azalea Pontificia* produced the same effect as that described by Xenophon. In 1838, Mr. Abbott wrote to the secretary of the Zoological Society that he had himself witnessed the effect of this honey, and confirming all that the Greek general had said. The evidence is too great to admit of doubt; at least it seems so to us.

In the above case the bees might have gathered honey from the "kill-calf" or "mountain laurel;" and while some hives may have contained considerable of this, others may have had little or none. There is no necessity for a "mystery" in the case! The honey in the hives was just what remained of that which the bees had gathered.

Fortunately, that kind of honey is found in but few places, where bees are kept in log-gums and box-hives, and only when there is a scarcity. Like glucose, bees will not touch it if anything else is available. It is never shipped to market, and the cases of poisoning always occur in remote places, backwoods, etc. It is a fact that though some cases of poisoning have been reported, but very few deaths are recorded from its effects.

◆

A Contemporary says "carefully lay up the honey crop." The best place to lay up a honey crop is in the stomach of buyers as quickly as it can be gotten there.—*Farm, Field and Stockman.*

◆

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and Member's Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Membership Blank.

Another Lawsuit has been begun. On page 491, Mr. M. Darling remarks that his case has been tried, and the judge withholds his verdict for the present.

Now comes Mr. S. W. Rich, of Hobart, N. Y., who has been sued by his rich neighbor for $1,500 damages, and also to compel him to move his apiary.

It seems that his neighbor is more troubled in mind over the alleged *nuisance* than in reality. He boasts that he will do all that money can get done to compel the removal of the bees. The apiary is in a small village, but there never has been a case reported of either a man or beast being stung; neither has there been any trouble caused by them. It seems to be a real case of disagreeable fault-finding.

Mr. C. H. Dibbern, in the *Plowman*, sensibly suggests the following:

> I can easily imagine cases where bees would become a nuisance, and the continued keeping of them would be an imposition, to say the least. Yet I am satisfied that most of such complaints have but slight foundations. There are some people who cannot see others prosper, and such are usually the complaining ones. Of course every bee-keeper should do everything possible to prevent his bees annoying any one. He should select such a location for the apiary that will be least objectionable to neighbors. If his apiary adjoins another man's land, plant a row of rapidly growing trees near such line, and train the branches to form a sort of hedge. This is also a good plan near a public road, where bees might interfere with teams passing. It is a good plan to have the apiary in a grove of small trees, and compel the bees to fly *straight up*, for when they are once high up in the air they will never bother to come down to annoy anything.

◆

The National Convention will be held in Indianapolis on Oct. 12, 13 and 14, 1886. *Rays of Light* remarks as follows concerning that meeting:

> We urge especially all Indiana bee-keepers to begin now to arrange to attend this meeting; it is a rare opportunity for us, and we should show by our attendance our appreciation of the favor conferred by holding it in our State, and that we are not lacking in *enthusiasm* and energy in our beloved enterprise, bee-culture. We hope and expect this to be the largest and most interesting meeting yet held by the association.

◆

Foster's adjustable case for comb honey has been received and placed in our Museum. It was described and illustrated on page 377, in an article by Mr. Foster, and further description now is unnecessary. Its use is fully described in his pamphlet on "How to Raise Comb Honey," which can be obtained at this office for 5 cents.

◆

The Tri-State Fair will be held at Toledo, O., on Sept. 6 to 11, 1886. Dr. A. B. Mason, of Wagon Works, O., is the Supt. of the Apiary Department again this year. The premiums amount to about $135 in cash, besides diplomas, etc.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

◆

Italian Queens.—We have a few untested queens which we can send by return mail. Three for $2.75; six for $5.00; twelve for $9.00.

QUERIES
AND
Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Bees Hanging Out.

Query, No. 286.—What would be the best, under the present circumstances, to prevent the bees in the entire apiary from hanging out all over the outside of the hives? The weather is and has been very warm the past week—say 90° in the shade, from about 11 a.m. to 2 p.m., and then goes down to 85° until 10 p.m. The operations of the hives are nearly stopped during these hours, although the bees have plenty of brood and storage room. The hives have pitch-roof covers, and are ventilated at both ends with holes with wire-cloth over them, and they are deep enough to hold a crate of 28 one-pound sections each. I have no sections on the majority of them, but have them tiered up two stories high, and working for extracted honey. They are pretty well shaded, but I have enameled cloth over the tops of the frames in the second story, but still there is plenty of air-space between the cloth and the ventilating holes. I tried a few by taking off the cloth, but they crowded up in the cover. I smoked them, but in vain; they only work some from 4:30 a.m. to about 9 a.m., and then from 4 p.m. to 7 p.m. There is no sign of preparing to swarm, or any other trouble, but simply idleness and signs of suffocation. They keep up a terrible hum, notwithstanding there is plenty of bloom and nectar in the fields.—Mississippi.

Give them more air by raising the hive off the bottom-board. Perhaps there is no honey in the blossoms, if they do not work.—DADANT & SON.

Try Mr. L. C. Root's plan, of a large ventilator in the bottom-board, as given in the BEE JOURNAL not long ago.—G. M. DOOLITTLE.

From the statements made I judge there is no honey in the fields for the bees to gather. If they are bringing honey freely, give them another story of frames. If the first supposition is correct, there is nothing to do for them, as there is nothing for them to do.—J. E. POND, JR.

I should give a large entrance, at least 1 foot long and ½ inch wide. I should also cover above the hive with a wide shade-board raised at least 4 inches above the hive. With this I can always keep bees at work when there is honey or nectar to gather.—A. J. COOK.

I should say that they want bottom ventilation. Raise the hive up from the platform from ½ to 1 inch high. At least that is just what I would do in this locality.—H. D. CUTTING.

You might try moving the second story forward so as to leave chance for a current of air through the brood-chamber from the entrance to the open space at the upper and back part of the brood-chamber.—C. C. MILLER.

I think all this is caused by the lack of nectar in the flowers. I have seen the same thing during a dearth of honey in hot weather. It is not objectionable, except that it shows there is little honey to be gathered.—W. Z. HUTCHINSON.

Use thin-walled hives; keep them well shaded, and have no double walls between the bees and "all-out-doors" over either the brood or surplus department. Give abundance of lower ventilation, and try upper ventilation, if you choose. With the hives you have, adapt them to the above conditions as nearly as possible. Do not let your colonies "clog" the combs with honey.—JAMES HEDDON.

During such spells of weather as you mention, my apiary presents the very same appearance you so lucidly describe. There is no help for it. You are mistaken about there being plenty of nectar in the flowers in the heat of the day during such heated periods. The absence of nectar at such times is the main cause of bees clustering on the outside of the hives in idleness—in my locality. Ventilation below, and the admission of air between the cloth and hive-cover is the best I can do under such circumstances.—G. W. DEMAREE.

In your apiary I know of no infallible plan to prevent the bees from hanging out. Give more shade to your hives. This will relieve the inside heat to some extent; but when bees can only work a few hours in the morning, before the hot, dry air dissipates the nectar in the flowers, and have to remain idle the balance of the day, they will hang out for the reason that it is more comfortable outside than in. "Hanging out" is not always a sign that the hive is filled with honey or crowded with bees. In dull seasons, weak colonies destitute of stores will often hang out. Too close extracting will sometimes cause a sort of demoralization of the bees, and they will cluster out.—J. P. H. BROWN.

When the temperature is 90° and above in the shade, it is too warm for many bees to stay in a hive without large bottom ventilation. We have had such weather here, and I find the narrow, 7-frame, single-walled hives cooler than any double-walled hive. Raise the hives up from the bottom-boards on blocks at the corners. There will be no danger of robbing if a 2-inch space be given all around. Let no bees into the cap, as they will be sure to go to the top and build comb there. A cap to a hive is a nuisance any way. With single-walled hives and plain covers, ventilation can best be given at the top at high temperatures.—G. L. TINKER.

The cause of the bees hanging out and remaining idle, is because there is nothing for them to do. It is no proof of "plenty of nectar in the fields" because there is plenty of bloom. Give them a feed in the open air at any time when they are hanging out on the hives, and it will satisfy you why they are idle.—H. R. BOARDMAN.

Cause of Worker-Bees Dying.

Query, No. 287.—Last week I found a couple of quarts of dead worker bees in front of the hive of my first swarm of the season. I had taken off 24 sections, and have since taken 46, and more are nearly ready to come off. No apparent harm has been done, but I would like to know the cause of their dying.—Grinnell, Iowa.

Probably some other swarm tried to join them and a fight ensued.—DADANT & SON.

In all probability the dead bees are the remains of some stray swarm that went into the hive and was killed.—J. P. H. BROWN.

I should say that a stray swarm tried to enter the hive and was killed.—G. M. DOOLITTLE.

The cause can only be guessed at. It might have been a small swarm that attempted to join the colony.—W. Z. HUTCHINSON.

Perhaps a small swarm tried to force an entrance and was killed.—C. C. MILLER.

Probably some little after-swarm tried to enter the hive of your "first swarm of the season," and was dispatched by that colony.—JAMES HEDDON.

Hard work and old age. I have often found bees dead in the field, and even on flowers. This is what we might call "dying in the harness."—A. J. COOK.

Who can tell? I confess I cannot. It might be robbers or old workers, and it might be many other things that caused the trouble. From the data given a guess only can be made.—J. E. POND, JR.

I had a like experience to the one you describe, the present season. I attributed it to the attempt of some bees trying to enter the hive when a swarm was in the air. Something of the kind was the cause of the trouble in your case. A colony that has a queen will not tolerate the intrusion of other bees.—G. W. DEMAREE.

It not infrequently happens that a colony of bees quarrel over the superseding of a queen, when a quart or more of bees will be killed and scattered over the ground in front of the hive. Their contracted abdomens will show that they have been stung. Sometimes the party of discontent is vanquished, but generally not. I have opened hives during such battles and found the queen "balled," or a queen-cell started, or both.—G. L. TINKER.

Natural Swarms or Nuclei—Which?

Query, No. 288.—Does it pay to let bees swarm? Or is it best to form nuclei? Or does it pay to let them hang on the hive 5 or 8 days, waiting for them to swarm, and very likely they do not swarm at all, as I have had them to do this before, and those colonies were the very ones that had to be fed in the winter?—W. A., Mo.

1. No. 2. Yes. 3. No.—DADANT & SON.

1. Yes. 2. Yes. 3. Give room so they can work instead of hanging out. —G. M. DOOLITTLE.

1. There are many opinions in regard to this matter, and each must decide for himself. 2. I most certainly should divide ordinarily. If, however, no honey was being gathered from the fields, the bees would be very excusable for not working, there being nothing for them to do.—J. E. POND, JR.

It will pay to let bees swarm if you want increase. If bees are managed rightly, and given room at the right time, and in the right way, they will not hang out in idleness if there is nectar in the flowers. Sometimes a colony will seem to waste time in an unaccountable way, but they are exceptions to the general rule; under proper management, dividing such colonies will break the spell.—G. W. DEMAREE.

If increase is desired it may pay to let them swarm, but even for this object it would be still better to divide. If I were working the bees for honey, I should not want over one swarm from a colony, and if there was no demand for bees, I should not allow any increase. My experience is, that strong colonies that do not swarm, if in a normal condition, and with a fair season, will always gather enough to winter on. If they fail to do this, then the fault belongs to the season and not to the bees.—J. P. H. BROWN.

It pays *usually* to let them swarm. If bees "hang out" five or eight days during a flow of honey, when they have room for storing it, are shaded, and have sufficient entrance to the hive, etc., I should say it was a very poor strain of bees, and should change the queens at once. There is much "food for thought" in the above query.—W. Z. HUTCHINSON.

If they are ready to swarm, and you find it convenient, then let them swarm. If it is more to your convenience form nuclei and build up. I have to do this, and find it works well. If the bees do not swarm as I wish them to do, I make them contribute to build up nuclei. Did not poor management keep them idle?—A. J. COOK.

Whether it pays to make increase by dividing colonies, or to encourage or discourage natural swarming, depends upon circumstances that I know not of in your case. At no time should your bees be idle, "hanging on the hives," increase or no increase, if there is nectar to be gathered.—JAMES HEDDON.

1. Yes, in some cases. 2. In some cases, yes. 3. It does not pay to let them hang on the hive waiting. What are you doing all this time? I do not keep that kind of a queen long.—H. D. CUTTING.

Let the bees swarm if they cannot be prevented by giving them surplus room early, and as often as they need it. There will be no loss of honey in the operation, if properly managed, and only a little more work for the apiarist. If the bees lay out, refusing to work in the sections when honey is coming in, I would place in the super a partly-filled section from another colony, and get comb-building started. If the bees that hang out are found full of honey, they are not idlers though they do not swarm at all. They are secreting wax if comb-building is going on inside of the hive.—G. L. TINKER.

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CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest: O¬ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Caging and Introducing Queen-Cells.

G. M. DOOLITTLE.

Years ago it was ascertained that if a colony of bees had been queenless from 24 to 48 hours, a queen-cell of any stage of advancement might be given this colony, and the colony accept the queen hatching therefrom the same as it would one hatched from its own brood. Advantage was taken of this to change inferior stock to such stock as was desired, and what has been known as the "cell plan," has been more largely used for the improvement of stock during the past century than any other.

When the queen traffic sprang up, so that the bee-keepers reared queens and sold them the same as other stock was sold, it became an object to place a nearly mature queen-cell in a colony or nucleus, at the same time the queen to be sent off was taken away. Upon trial it was found that the bees did not propose at all times to accept of such an exchange, and especially before they had realized that their laying queen had been taken away from them. Their non-acceptance of cells given in this way proved with me to be a rule, although a few have reported favorably. In fact, unless I waited from 36 to 48 hours after the removal of a laying queen, before giving a cell, 19 out of every 20 would be destroyed; while other apiarists have reported nearly the same result. As waiting two days every time a queen was sold from a nucleus before a cell was given, and then from one to two more before it hatched, was quite expensive, I tried many plans to obviate the difficulty, none of which gave me satisfaction.

One night, after thinking the matter over, I fell asleep. After sleeping an hour or two I suddenly awoke with the vision of a cage for caging queen-cells appearing before me. Now the idea of caging queen-cells is old, and cages specially adapted for this purpose have been advertised for a good many years, but the ideal cage presented before me at this time was for the special purpose of allowing the safe introduction of a queen-cell nearly mature, to a colony at the time of taking away its queen, the cage being so constructed that the queen could hatch and walk right out among the bees the same as if no cage was there; while at the same time the cell was safely secured against the bees, so they would not destroy it.

All are aware that when the bees destroy a cell they bite into the side or base of it, and never at the point. Well, the cage I saw upon awaking was to be made so as to protect all parts of the cell from the bees except the point, and this was not easy to their mandibles. The cage was made by rolling a small piece of wire-cloth around a V-shaped stick, so that a small but not very flaring funnel was made, the hole in the small end being as large as an ordinary lead-pencil. After making the cage I cut off a piece of ⅝-inch cork for a stopper, put a nearly mature queen-cell into the cage with the point down into the lead-pencil hole as far as it would go, when the piece of cork was put in so the bees could not get at the base.

I now took a fine wire and run it through the meshes of wire-cloth just above the cork, so as to keep the cork in place, while the other end of the wire was bent so it would hold on to the top of the frames, so as to hold the cage in the position I wished it between the combs. This caged cell was hung in the hive at the time the queen was removed, and in from 24 to 48 hours, according to the age of the cell, I had a nice virgin queen in the hive. As soon as I saw that it was a success, I made more cages, so that now I have no more trouble with bees destroying queen-cells, not having a cell destroyed when thus caged.

The cage protects the cell everywhere except at the point, but allows the bees to get accustomed to the presence of the cell the same as if the cage were not there. The lead-pencil hole allows the queen to hatch the same as if the cell were not caged, while the bees can feed the queen and hold her in the cell as long as they please, so that she cannot get out till they are ready to accept her.

After getting thus far, about a month ago another thought came to me, which was, that I had some old queens which were not keeping their hives filled with brood as I desired, and why could I not use my invention in this case, so as not to lose any time to the colony of bees, to any nuclei, or to be to the expense of purchasing any queens? To think was to act, and the next day found me putting a caged queen-cell into each hive which had a queen that did not come up to my standard of prolificness. In a few days I looked into these colonies, finding that in every case the queens had hatched all right, and in all the hives thus treated, all but one had the old queen quietly depositing eggs, while on another comb was my young virgin queen as much at home as if no other queen was in the hive. In the one exception, I found the young queen out at the entrance dead, showing that although the bees could not prevent her hatching, yet they decided they had no use for her. In this they were correct, for in this case their queen has since come up to the standard of prolificness that I require. The young queens in all the other hives became fertilized in due time, and one after another of the old queens passed away, except one which still has both the old and the young queen laying in the same hive, and often on the same comb.

Another thing: None of these colonies thus treated have swarmed, save one, but have kept steadily at work giving me a nice lot of honey, while other colonies having good queens last spring, have done less, owing to their disposition to swarm.

After the honey harvest begins to wane is the time with the bees for a general superseding of oldish queens, in this locality. For this reason I am now rearing a fine lot of cells from my most valued queen, which cells are soon to be used in the above described cages, a cage being placed in every hive I have reason to think may have a queen that is not good for another year, thus getting a queen from choice stock in every hive where an exchange is to be made. If the queen does not need superseding, and the bees kill the queen hatching from the cell, I am out only a little trouble, while in every one which is accepted I get much value.

The above is only an item which I have studied out, and if as good as I believe it to be, it will only be an item to be added to the general fund of knowledge. As I have freely gathered item upon item of value from the AMERICAN BEE JOURNAL in the past, so I as freely give this item to the readers, that we may be of mutual benefit to each other, and help to make the AMERICAN BEE JOURNAL of the present what it has always been in the past—the best exponent of bee-knowledge in the world.

Borodino,⊙ N. Y.

For the American Bee Journal.

Report, Honey-Dew, etc.

C. W. DAYTON.

Our chance to obtain a honey crop has again come and gone. I think that figuring for the last 12 years it hardly equals an average, but of the last 5 years it was somewhat above the average. The honey-flow began very suddenly on June 7, and very dry weather caused a slow and steady yield for 35 days, ending July 12 with basswood. The colonies run about 100 pounds each, part comb and part extracted honey, with 90 per cent. increase. One colony gathered 462 pounds of surplus besides a winter supply, and in amount it was closely followed by two others. Twenty other colonies only stored enough for winter after building up.

I had the bees equally divided in two apiaries of 58 colonies each, and three miles apart, and while 50 or more swarms issued in one apiary not one issued in the other; so I easily cared for the two apiaries alone.

To get a large yield the bees should be of the right age, should not have much brood to care for, should be shaded, have plenty of room for honey, and should not desire to swarm. By close attention these conditions may be easily brought about, but a small amount of neglect may overturn any one of these conditions and effect an immense difference in the amount of honey gathered. For example: The stories for extracting should be adjusted just before the queen is ready to place eggs in queen-cells. If we wait until eggs are placed in queen-cells, nine times out of ten it will cause swarming, idleness, and perhaps annoyance and vexation to the apiarist. If we furnish the space in time, and as fast as it is needed, and that space is immediately occupied, a colony may be easily carried through the season without swarming, and by that plan I run an apiary through the season without the issue of a swarm.

For years, while Mr. O. O. Poppleton and others located only a few miles east of here, have been reporting yields of 100 pounds per colony without the aid of basswood, I have been making desperate efforts, but always failed to equal it, until this year when I partly solved the mystery. Perhaps some may look upon the figures that I have given as useful in bringing about low prices on honey.

It may be outside the boundaries of my "say," but if such opinions are admissible, I would venture that the harping upon such subjects as the aphidæ product, or "bug-juice," may bring out a rival of the famous (?) Wiley. It has been proven what some kinds of honey-dew is, and where it comes from, and it ought not to be held up as extensively existing. If bee-keeping is to become an industry, its mysteries should disappear and its most pleasing features greet the view of the injurious.

On page 419 the Attorney General of this State presumes to answer the question, "Are bees taxable in Iowa?" He says they are not in the list of exempt property, so they must be taxable. Again, we find that they are not in the list of taxable property, so again we infer that they are exempt from taxation. But there is one thing we know, and that is, that there is a special law in Iowa making bees exempt from taxation. Now, what remains is, whom to look to for this law on bees—our legislature, sundry officers, or a vicious neighbor. I am not specially opposed to the taxation of bees, as I pay taxes on my bees every year, while I still know them to be exempt; yet I am not certain but the uncertainty of apiculture and the mutual benefit of bees should be enough to make them exempt from taxation. Perhaps a powerful "bee-keepers' union" might bear upon our law-making powers so as to turn that point in our favor. All of the laws apiculture will admit of will be erected as soon as it becomes an industry, and will be to a large extent at our favor or disfavor, according to the dollars and brains accumulated in its defense. This shows one of the reasons why every bee-keeper should join the "Union."

Bradford,♁ Iowa.

For the American Bee Journal.

Horse Killed by Bees, etc.

FRIEDEMANN GREINER.

In my experience with bees, the killing of any animal by stings had not come under my observation as yet. Yesterday I witnessed a case which dispensed with all my doubt about the possibility of the thing. J. V. Weir, Esq., left his riding-horse by the gate of his dooryard, as usual, while he went to dinner. An apiary of 45 colonies was within three rods of the spot where the horse was tied, and the bees in great numbers attacked it in our absence of not over 12 minutes. When we discovered the state of affairs, the horse's head was almost covered with mad bees and swarms of them around it; which would sting everything and everybody anywhere near. I could not induce the animal to move at first, and to protect it I kept it covered with blankets; but after awhile, and after procuring more help, I succeeded in getting it out of the reach of the bees, and we then applied remedies, as washing with cold water and soda, then besmearing with linseed oil; internally we gave whisky with laudanum, but all efforts were in vain, and the poor animal after a struggle of three hours was dead.

Moral: Let us not give cause for complaint to our neighbors and the public in general by keeping bees near the roads nor in closely-settled places; let us surround our apiaries by high fences, and, still better, by evergreen hedges. Other suggestions could no doubt be made. An abnormal case of this kind may not occur in one's life time, but that it can, should be reason enough that we should be careful and take the necessary precautions against the possibility of its occurrence.

The honey season with us still continues to be good, contrary to Mr. Brown's statement (page 443) of the honey season being nearly over. Some of our colonies filled 24 1-lb. sections from July 12 to July 20; that does not look much like a slack. Virginia will furnish quantities of honey this year.

White Post,♁ Va., July 22, 1886.

For the American Bee Journal.

"Bird's-Eye View of Bee-Keeping."

DR. C. C. MILLER.

I make no question as to the general truth contained in Solomon's statement about there being no new thing under the sun, but it hardly applies literally to Rev. W. F. Clarke's new book, "A Bird's-Eye View of Bee-Keeping." A book entirely devoted to bee-keeping, and every word of it in poetry, is certainly a new thing to me. I would like to give the readers of the BEE JOURNAL a fair description of this little book, but how can I unless I quote almost the whole book in its practical form? As the entire work costs only 25 cents, it can easily be obtained by all, so I will content myself with sampling its pages here and there. Its author says:

This treatise is for novices, and such
Should take care not at first to attempt too much.

Then follows advice as to books and papers to be obtained "before a bee is bought."

None should attempt the business till they learn it,
Or hope to make a cent unless they earn it.
None who are seeking a soft place to lie on,
Need trouble themselves this pursuit to try on.

* * * * * * *

If you propose to be a specialist
In keeping bees, permit me to assist
Your cogitations, by, in brief, suggesting
A few pre-requisites before investing.
That knowledge of the business and then fitness
To follow it are needful, facts bear witness.
But what is fitness? Well, it is, in part,
To have quick eye, soft hand, and lion-heart;
A mind to grasp the most minute details,
And, with it all, patience that never fails,
Promptness to do all work in its right season,
And clear perception from the facts to reason.
It is to have a perfect self-control,
And let alone the intoxicating bowl—
If you this evil habit once begin,
An apiary never set your foot in.
A hopefulness that never fails or flags,
A diligence that neither loafs nor lags,
High moral principle that scorns to cheat,
And makes a point all honor's claims to meet.
The golden rule and law of love your aim,
And your best treasure an untarnished name.
If you are wholly ignorant of bees,
And yet possess such qualities as these,
You must content yourself to be a creeper,
Along the road that makes a good bee-keeper.
Go slowly, do not be in foolish haste,
Nor think that you your time and money waste
In making full and careful preparation,
For entering on your chosen avocation.

The author varies the usual advice and says:

Beginners, I advise to raise comb honey
Until they scrape together enough money
To purchase an extractor, pails, and things,
Necessity for which extracting brings.

When hiving a swarm,

Be sure that your new hive is clean and neat,
Smear it with beeswax and with honey sweet,
Have no foul smell about it, for the bees
Are mostly all old-maids, whom you must please
By making things quite tidy and "so—so,"
Else in a fit of dudgeon, off they go!

* * * * * * *

I go for out-door wintering, on a stand
Where you can manage them with ready hand,
Free from laborious lifting to and fro,
Which makes the luckless bee-man's back ache so.
I set my hives two feet above the ground
Where ease of handling them is always found.
The man who first devised a four-inch stool
To set his hives on was an arrant fool,
And needlessly condemned himself to stoop
Till with fatigue and pain his spirits droop.

Of course "hibernation" is not omitted.

And now, the season's cycle is complete,
The summer hours march on, with nimble feet,
Soon once again the welcome time will come
When honey-gathering bees, with cheerful hum,
Will do the work they understand so well,
And store sweet nectar in each vacant cell,
Smoothing and polishing the surface all
With that small trowel, we a dagger call,
But which by them employed so much is
In giving honey-comb its final touches.

Then after some advice on a few special topics, the book closes with—

Farewell, and in a brighter world than this,
May you enjoy a life of perfect bliss;
Where thrilling music through the welkin rings,
And nectar sweet is gathered without stings!

Marengo,♁ Ills.

☞ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.

E. T. ABBOTT, *Sec.*

For the American Bee Journal.

The New Honey-Plant.

T. F. BINGHAM.

The "Chapman Honey-Plant" is not only pleasant to behold, but it is unusually attractive to honey-bees and their larger cousins—the beautiful humble-bees. I shall not presume to predict—and as only three buds are yet open, it would not be safe to say that it is the only plant likely to prove a success as an exclusive honey-plant. This, however, may be said, that it is a *vigorous grower*, and may be easily raised; perhaps it would grow without special care. As all the readers of the BEE JOURNAL may not be able to see the plant in bloom, I will briefly describe it.

It grows from 3 to 4½ feet high, and has on each root or crown from 6 to 16 buds or heads. These buds are round like an apple, and from 1 to 1¾ inches in diameter. The surface of this bud is covered with small white flowers having bluish stamens. Like clover, the whole sphere is not in bloom at one time. The top opens first and gradually continues to open down the sides for about four days. The heads or buds are of all sizes and ages, and will require at least three weeks to mature and bloom. It is therefore safe to conclude that it will continue to attract bees not less than the above-mentioned period of time.

It will be observed that I do not state that bees gather honey from it, but that the flowers are very attractive to bees, and from the fact that only three of my plants are in bloom, and that only one head on each of the three plants is yet open, no doubt people not enthusiastic will be surprised that any one should presume to call attention to such a plant on so slight an acquaintance.

I must say that while I should have been incredulous as to the interest bees take in it, had that interest been described to me, I should not have been more incredulous than I was surprised when I found ten honey-bees and one humble-bee on a single head at one time, all busy in extracting nectar. The three heads now in bloom are not without from 3 to 10 or 15 bees on each one all the time. The bees do not seem to be interested in the pollen of the flower, although it has it in abundance, but continue to thrust their tongues to the bottom of the flowers. One of the peculiar features of their visits to the flower is the long time they remain upon them.

How extensively these plants have been distributed among bee-keepers, I cannot say; all I can say is, that as I am able to regard Mr. Chapman (Capt. Chapman, as he is familiarly called where he lives) as a tried friend, having lived by and known him for a period of 20 years, it was not strange, though entirely unexpected, that I should be made the delighted recipient of 50 of the above plants by express last spring, in time to observe the bees upon them, still in too small numbers to really know the amount of honey produced.

It is of importance that they bloom when they do—just after clover and basswood are past. Particularly is this true in a dry season like this, when, after July 6 (the close of the basswood honey season here), bees could find no flowers to visit, and of course an unusually large number of sections are left incomplete.

If now a plant like the Chapman honey-plant could come forward and furnish honey for even a few days, until the uncapped sections could be *rounded* off and *completed*, it would add greatly to the income of my bee-ranch.

Abronia, ♀ Mich.

Rural New Yorker.

One thing that Fraud cannot Counterfeit.

A. J. COOK.

I am surprised to note the following response to an inquiry in the Farmers' Club of a late *Rural New Yorker:* "It is probably true that men, without the aid of bees, now make and sell comb honey in which neither wax nor honey is used; and that the comb is made of paraffine and filled with a substance like honey." Now, Mr. Editor, I wish to say that the above is not only not probably true, but that it is utterly absurd, mischievously false, and entirely impossible. No such thing has ever been done, and it is very certain that no such thing ever can be done. Only Nature's deft and delicate fingers can fashion the beautiful comb honey. Comb honey is one thing that fraud cannot counterfeit. Whoever purchases the beautiful, white, incomparable comb honey, may be sure that he has Nature's product, pure and genuine. A few years age Prof. H. W. Wiley, now Chemist of the Agricultural Department at Washington, published an interesting article on sugar, in the *Popular Science Monthly*, in which he made the above statement, apparently in all soberness. Afterward, when Prof. Wiley was called upon for proof of what was palpably absurd to any one who knows of the real nature of comb honey—a substance which is clearly inimitable—he replied: "I only wrote it as a scientific pleasantry." This statement was apparently as candid and earnest as any part of the article, and so was widely copied by the press of the country, and now, like all untruthful statements it is, ever and anon, lifting its ungracious head only to do mischief.

Comb honey owes its excellence to very delicate structure. The cell-walls of the comb are only 1-140 of an inch in thickness, and thus the delicate wax breaks up in the mouth almost without any extraneous force, and just serves to reduce or dilute the exquisite honey, and so becomes one of the coveted articles of diet. It seems almost like sacrilege to say that such an incomparable article can be made artificially. As before stated, it is utterly impossible, never has been done, and never can be done. I hope, Mr. Editor, you will publish this correction at once, and that the many papers that have spread the error may be equally quick to fling out the correction; even then much wrong will be done, for as we all know, falsehood will traverse the globe, while Truth is hitching up her horse.

Agricultural College, ♀ Mich.

For the American Bee Journal.

Taxing Colonies—Non-Swarming Bees.

J. E. POND, JR.

Mr. Camm, on page 454, in discussing the matter of taxation of bees, may have been surprised and disappointed by the answers given to Mr. Blair's query, and why he should be so, is plain from the reading between the lines of his article. Insofar as my own answer is concerned, I have to say that I answered the question as I then understood and now understand it. The matter was not inquired into, whether bees ought to be taxed or not, either morally or as a business proposition; the question being whether bees could be legally taxed, and were so taxed in any of the States or not. I said and still say that an apiary is as subject legally to taxation as any other species of personal property, statute exemption being the only means of relief therefrom. In answering I spoke only for my own State—Massachusetts.

Mr. Southwick makes the point that bees are not absolute property, consequently legally exempt from taxation. In this he is partially correct. A colony of bees hived in my own apiary are absolutely my property, they are solely under my control, and if stolen the thief is punishable for the larceny, which would not be the case were they not absolute property. They fall under the same category as pigeons or doves, and are not *feræ naturæ* while in my hives and located in my apiary, any more than are pigeons or doves when in the cote of the owner.

As to the point that if a "hue and cry" was made in the matter, all bees would be taxed anyhow, the remark was made jocularly, and I supposed it would be so understood. To Mr. Camm I will simply say, the communistic idea that nothing but real estate should be taxed under any circumstances is hardly a question for discussion in a bee-paper, else I might give him my views on the subject, which, although based on political economy, are decidedly in favor of the idea that all products that possess an intrinsic merchantable value should be taxed for public support.

Mr. Pryal, on page 456, gives us a novel way or manner of obtaining favorable decisions from the courts of highest resort in the various States. The same thing was hinted at in the BEE JOURNAL a few weeks ago. As a lawyer, all I can say in regard to the proposition is, that our Massachusetts courts would disbar an attorney who should bring a fictitious suit before them for the purpose of getting an opinion or decision. We have some rights; I for one would prefer to have them all trampled under foot, than maintained by fraud or evasion.

STRAIN OF NON-SWARMING BEES.

Have any of our bee-keepers on a large scale—say keepers of 100 or more colonies—ever attempted to form a strain of non-swarming bees by using queen-cells from which the queens were just ready to emerge, as the means of heading colonies, and following down on that line for several generations? This question is one of interest to myself, and theoretically I believe the plan is correct. Introduce a queen-cell just on the point of letting out the young queen, say on the fifteenth day; keep close watch of this hive, and draw from it in the same way before a swarm issues; continue this plan for two or three years, and I think and believe that a non-swarming strain will result. In order to carry the point to a nicety, the drone mothers should be produced in the same way.

I have been able only to test the matter slightly, as my apiary is small. It is possible that the majority would not care for a non-swarming strain; still, as a matter of experiment, it might prove interesting, and of importance in ascertaining how far the matter of education can be carried. I have a colony that has not sent out a swarm for two years; the queen that now heads it is in her third year, and is the third generation from a queen-cell introduced as above, each of the intermediate queens, as well as this last one, having been introduced in cells from which they were just ready to emerge. This case alone proves nothing; still it is a straw or pointer; and if the same result should follow in a number of instances, I think the theory which I intimate would be well proved. Has any one the time and inclination to test the matter?

Foxboro, ○→ Mass.

Homestead.

Preparing Bees for Winter, etc.

O. CLUTE.

With the bees, winter is the time of quiet. But the wise bee-keeper will be active in the care of his little friends, for upon such care depends his success for the summer that is coming.

If bees are wintered in the cellar, care should be exercised as to the time of putting them into the cellar. If they are put in too early the weather will be warm, the cellar will be at too high a temperature, and the bees will be injured by too great activity. The hives should not be put into the cellar until cold weather really sets in. They should be carried in on a cold, dry day. In carrying them in they should be disturbed as little as possible. If the temperature of the cellar is not above 50° they will soon be quiet after being put in. See that the cellar is perfectly dark, that it is well ventilated, that it is as quiet as is possible, that it is free from rats and mice, and that the temperature is kept as near as may be at 45°. If it goes up to 50° occasionally, no harm seems to result. If now and then it falls to nearly the freezing point, no harm ensues. But keep it as near as you conveniently can at 45°.

Bees wintered on the summer stands have probably been protected in some manner. See to it that the protection is all right. Have all entrances small. It is a good plan to put at each entrance somewhat early in the fall, a screen that will keep out mice but will let bees pass. Then when the mice begin to look about for a warm place in which to pass the winter they find their entrance to the hives barred. Mice have a great liking for making their nests on top of the frames, immediately over the cluster of bees. The heat from the bees keeps the nests warm, and the mice are very fond of eating the honey and pollen, and the bees also. If the entrances front east or south they will get less wind than if they front north or west. But a piece of board should always be stood before the entrance, leaning against the hive, so as to keep the wind from blowing directly into the entrance. Keep all hogs and cattle away from the yard where the bees are kept.

When snow comes it is wise to bank it closely against the hives, all around except over the entrance. Some reliable men advise putting it over the entrance too, and they relate how they have wintered bees successfully under a snow bank which completely covered the hives. Perhaps snow over the entrance is sufficiently pervious by the air, so that bees will not smother; but there is always danger that the entrance to the hive will become filled with ice, by the freezing of water that runs out from the condensation of moisture in the hives. If the entrance does thus become clogged with ice the bees will smother and die. Hence I do not advise banking snow against the entrance. If snow drifts all over the hives, I should advise that it be shoveled away from the entrances frequently, and that the bee-keeper assure himself that the entrances are not clogged with ice. Sometimes dead bees collect against the entrance inside the hive, and so prevents sufficient ventilation. This can be prevented by thrusting a small stick in and moving the dead bees to one side.

WINTER MEETINGS OF BEE-KEEPERS.

During the busy season of the year it is difficult for bee-keepers to get out to meetings. Much work keeps them at home. But in the winter they have more leisure. It would be well to have a winter meeting of our State Association in Des Moines, for listening to essays and addresses, and for practical discussions as to methods of work, and as to markets, and other questions of general importance to bee-keepers. In some States such meetings have been held for a number of years, and have proven of much interest and value. Our Iowa bee-keepers have thought much about having such a meeting, but thus far it has not seemed possible to arrange one. But as our bee-keeping interests develop we shall doubtless be able to get the co-operation of a sufficiently large number of the most intelligent bee-keepers to make a profitable gathering.

Some of us find that railway fare and hotel bills in going to Des Moines for a meeting are a serious obstacle to our going. But this objection does not apply to meeting in each county. If the bee-keepers of each county would come together for a meeting, at least once during the winter, and discuss all questions of special interest to them, they would find many good results coming from the meetings. If an address from a really able man, or one or more essays from practical bee-keepers, can be prepared for such a meeting, it is well. But do not put men on for addresses or papers unless they know something about bee-keeping. Better have no address and no essays than to have the time wasted in listening to men who know nothing.

Some of the most profitable meetings of bee-keepers I have ever attended had no addresses and no essays; but they had a question-box. Each member wrote questions on slips of paper, put them into the box, the chairman drew them out and called on a competent man to answer. This often led to remarks from others, and we got thus the best practical knowledge of all on every question that was asked.

Iowa City,⊙ Iowa.

For the American Bee Journal.

Results of the Season So Far.

I. J. GLASS.

Being incapacitated for manual labor by a fall from a load of hay, and judging the honey-flow about at an end, I thought it safe to report for the season. I have buckwheat sown, and we generally have an abundance of fall flowers, the principal ones being goldenrod and carpenter's-square, so I anticipate a fall-flow of honey, but not sufficient to expect any surplus, as I always confine my colonies to the brood-chamber, and let them store the fall-flow for their own use. I have 12 colonies that averaged a little over 100 pounds each; some of them have stored 150 pounds, and on examining them yesterday I find very little honey in the brood-chamber, it being used to its fullest capacity for brood-rearing.

Some apiarists claim that it is safer to winter bees on white clover honey. I do not doubt that in the least, yet with me I find it difficult to grade the bees' food to comply with all the whims of the theorists, so I look to having a good, warm receptacle for them, either wet or dry, and not too much ventilation. As to their food, I depend upon the fall flow for the main portion of their winter stores, and I have never lost a colony yet in wintering. Last spring I took from my cellar 61 colonies, one of which was very nearly starved, the queen and only about half of the bees being still alive. After they were through swarming out and deserting their hives (a freak to which my bees are addicted in early spring) I had 55 left; I now have 94 colonies, and they have produced 2,000 pounds of extracted and 1,500 pounds of comb honey. I have sold 400 pounds of comb honey for an average of 11 cents per pound, and 360 pounds of extracted honey for 8 cents per pound. I cannot get the big prices that I read about.

I could have done better with my bees, but being the assessor of our township, which includes the county-seat of 3,000 inhabitants, you may guess it was rather a hard job to be accomplished in two months, although I had the advantage of considerable experience, as this is my fourth term.

The season here has been remarkably good, but at present the long absence of rain has begun to show on vegetation, and unless it rains soon I fear our bees will be short of winter stores.

Sharpsburg,⊙ Ills.

For the American Bee Journal.

Two Queens in One Hive.

E. C. KEPNER.

I have a colony of bees that cast a swarm about June 10, and at that time it had plenty of brood and several capped queen-cells. I put the section-boxes back again, and did not look at them until July 19, and, on opening the hive, to my surprise I found neither brood nor larvæ; and supposing their queen had been lost in mating, I did not look for eggs, but went at once to a good, strong colony and got an old queen and introduced her to the supposed queenless colony. After leaving her caged for 48 hours I turned her loose, and they accepted her all right.

I thought nothing more of her until I happened to pass by the hive to-day, so I thought I would examine them and see how she was doing. I opened the hive and lifted a frame from the centre, and I at once noticed larvæ which was too old to come from her laying, for she had only been free for three days; I turned the frame around and I saw a young queen. I then supposed my old queen was dead, but she was not, for on taking out the next frame I saw her on it busily depositing eggs. This proves that there had been two laying-queens, and also that they accepted an old laying-queen while at the same time they had a young laying-queen in the hive.

I have frequently seen two laying queens in the same hive, but it was the old queen and her daughter, but never before have I known a colony to accept a laying-queen when it had one.

Where did this young queen come from? It has been about 44 days since the old queen came out with the swarm, and I know she came out, for I keep all my old queens' wings clipped, and I am always at the hive about as soon as a swarm commences to issue, so I know just where she is. If this queen hatched from one of the eggs of the old queen, and hatched in 16 days after the swarm issued (which is hardly probable, for they had capped queen-cells, as stated before), and had waited the full 21 days before laying, it would make the full 37 days; and I know that the colony was without a laying queen for that length of time, and as near as I can tell from the larvæ, a little longer.

This young queen, I think, is a hybrid, and the colony spoken of are pure Italians. I have a few hybrid colonies in my apiary. Do you not suppose that that particular colony stole an egg from a hybrid colony and reared this young queen from it? This is my belief. But what about their accepting the old queen when they had a laying queen?

After fifty days of rain, the weather has become settled and is fine now, except the nights are a little cool; but our bees are doing nicely on sumac, and we will have plenty of bloom for two months yet, which will be mostly cow-peas, fall asters and goldenrod.

Pikeville,○+ Tenn., July 24, 1886.

Bee-Stings for Rheumatism.

A bee-keeper in Iowa informed a neighbor that the stinging of bees was a cure for rheumatism. As the neighbor was a sufferer from the disease, he concluded to try the remedy. The story in his own words is as follows:

"Thinks I, we've got the medicine right here at home, and it won't cost anything, and I will just try a few; I think people, as a rule, take too much medicine any way; better try more home remedies. So provided with a small paper sack and some courage (for I must confess I was always a little careful not to disturb bees, for it hinders them from gathering honey, you know), I held the open sack at their entrance and soon had it well filled with the buzzing creatures. I then made straight for the house, gave sack and bees to wife and held open my pants leg and said: 'Now start 'em up.' She pushed sack and all up arm's length, and laughed a little and asked, 'Are they going?' Says I, 'You bet!' Just then one administered, and I grabbed for him (as is natural on such occasions), and from that every last one laid to, and four doctors with eight resurrecters couldn't do business so lively as those bees did. I, in a rather commanding manner and tone, screamed for wife to take 'em out, but she seemed to be slow about it, so I got out, and left breeches and bees in the same room, and I went to bed in untold misery."

The sufferer was, however, not in so bad a plight as the genius who thought if a little was good, a good deal was better, and so had a whole colony emptied into bed with him.—*Exchange.*

Local Convention Directory.

1886. *Time and place of Meeting.*

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

"Paradise Regained."—P. P. Nelson, Manteno,○+ Ills., on July 23, 1886, says:

We are having a very prosperous season with the "blessed bees;" compared with the past two seasons, it seems like "Paradise Regained." They have swarmed profusely, and have stored and are still gathering an abundance of the most beautiful honey.

Motherwort.—Jno. D. Gill, Philipsburg,⊙ Pa., on July 26, 1886, wrote as follows:

1. I send by this mail a specimen of a plant on which bees have worked vigorously for several weeks. Please give its name and characteristics. It is a rare plant here. I have never noticed it before.

2. Do bees get honey or only pollen from asparagus?

[1. The plant is *motherwort*, which yields honey in abundance, and is a great favorite with the bees.

2. Asparagus furnishes nectar to the bees.—Ed.]

Leaves Containing Honey-Dew.—J. W. Sanders, Le Grand,⊙ Iowa, on July 20, 1886, writes:

I send a sample of leaves containing the so-called honey-dew. I desire Prof. Cook's opinion on it, through the Bee Journal, as there are many bee-keepers interested in it, and I fear are misled about its origin. Some claim that there was so much sweet in the flowers; that it evaporates through the day, condenses at night, and is found in the form of dew on the foliage the following morning. The idea amused me, as I supposed it was from an aphis of some kind. So I went yesterday six miles and obtained these samples. They are not as good as could have been obtained two weeks ago. The leaves that are whitened are some that were covered with it then. I send several kinds of leaves that contain more or less of it. The grove in which it is found is principally oak of small growth. I also send some of the leaves of the oak taken from the above place, where the sweet substance was to be found. Some leaves showed large drops of it, and others a fine spray. Yesterday it was only to be found in spots, while about two weeks ago it was generally on the lower foliage. The proprietor had not seen his bees working on it, but supposed they did. White clover and linden were at the time at their best, and he has a nice lot of fine comb honey in his apiary; but from what I could see and learn I think but little was from the so-called honey-dew. If my samples are sufficient, I hope the Professor will give the origin of this sweet substance, and tell us if it is produced in any other way except by plant-lice of some kind.

[The leaves and secretion are so well described by Mr. Sanders that I need not repeat. The nectar, as secreted, is in such quantity that we can get quite a taste. There are no cost skins of lice on the leaves, which there would be if the sweet was secreted by lice working on the leaves containing the sweet. With others I tasted of the nectar, and could plainly discern not only sugar—probably starch sugar—but also a perceptible taste like oak-juice or tannin. I presume this sweet comes from the same source as mentioned in the last number of the Bee Journal, from acorns attacked by an insect. This would account for the peculiar oak-juice flavor, and for the appearance of the nectar in such considerable quantities in a single place; a wounded acorn was just above.

That the sweet secretions or nectar from flowers ever evaporate and then fall as dew, I have never seen reason to believe. I think that we can always find other explanations. Even in a sugar-house where hundreds of gallons of nectar are evaporated, we never find a deposit sufficient to attract insects, although in such a case a little sugar—very little, is driven off with the steam, probably by the expulsive force of the steam.—A. J. Cook.]

Bee-Culture and Silk-Worms.—H. Fisher, Oshkosh,○+ Wis., on July 18, 1886, writes:

While I am unable to report good news about my bees, on account of unsuccessful wintering, I am engaged in an industry as interesting as bee-culture, which proves more successful because the work is done before cold weather comes, and no keeping through the winter is necessary; I mean "silk-culture," which assumes quite an important prospect. Several years ago I began to make the test with about fifty Russian mulberry-trees, and now I have many thousands of them, finding them perfectly hardy enough to stand our cold climate. They are excellent fast growers, which furnished me food for about forty thousand silk-worms, producing a fine, good quality of silk, which finds a ready sale this summer. I find it very interesting, pleasant and light work, similar to handling bees. Nearly 50,000 persons are engaged now in this new industry, but there is room yet for 100,000 more to supply our 380 silk mills with raw silk, besides the many new ones which will be started.

Bees Doing Well.—P. L. Gibson, Muscatine,○+ Iowa, on July 23, 1886, says:

Bees are doing well in this locality. I started with 22 colonies in the spring, and I have just doubled the number, all now being strong colonies. My last swarm was on June 24. White clover honey was pretty plentiful, but lasted only a short time, mostly being consumed by young bees. We have had no rain for four weeks. Bees are gathering some honey-dew, and are working mornings and evenings. I have taken off about 500 pounds, and there is that much more in the hives ready for capping. Should we have a rain soon we will get a bountiful crop of fall honey.

What? What?—J. H. Hassler, De Pue,♂ Ills., on July 29, 1886, writes:

My nice white sections of honey are nearly all spoiled by being filled around the edge with some very dark honey, having the appearance of muddy water. From what is it gathered? I have some sunflowers in the garden for the first time, and as I never before had such honey I thought perhaps the bees got it from them. If I find that they are the source, I will cut them down at once.

[Cultivated sunflowers are of no value for honey, and *may* have caused the trouble, though it might be traced to some other bloom in the neighborhood of your apiary.—Ed.]

Are Bees a Nuisance?—Marshall Darling, Waterbury,♀ Conn., on July 23, 1886, wrote as follows:

The trial of the suit against my keeping bees (as mentioned on page 339), came off in the District Court on June 28, before Judge Bradstreet. It took about all day to try the case. The Judge reserved his decision and has not given it yet, and may not until September, when the District Court meets again. The plaintiff could only prove in court that he had lost only 12 days rent—one family having moved out on May 13, and another one moved in on May 25 and paid the same rent. I still keep 12 colonies of bees. I have sold 11 colonies. There is no complaint from them now. I never had bees do better than they are doing now. This is all the Waterbury *Evening American* said about the case: "To-day the District Court heard the very interesting case of George L. Stanley *vs.* Marshall Darling, application for an injunction to prevent the defendant from keeping bees. The plaintiff's house is situated close to where the bees are kept, and it is claimed that they are an injury."

Very Dry Weather, etc.—L. G. Purvis, Forest City,+○ Mo., on July 26, 1886, says:

Bees have done very well here this season. I commenced with 48 colonies, have increased to 74 by natural swarms, and so far I have taken 3,220 pounds of extracted honey, and about 100 pounds of comb honey, with from 300 to 500 now ready to extract. It is very dry here; we have had no rain for a month, and I fear it will cut our fall crop short, which is usually good here.

Curing Foul Brood.—Dr. J. C. Thom, of Streetsville, Ontario, writes this request for publication, on July 28, 1886:

I would like to have the experience recorded in the American Bee Journal of those who have tried the Cheshire method of curing *Bacillus alvei*, commonly called "foul brood," a disease which is not unknown in Canada. If those who reply have succeeded, will they kindly tell us just how they did it, and if it is a permanent cure?

[This is a good suggestion, and we would like to record the *modus operandi* if a cure was effected, as well as the disappointments of those who have experimented with it unsuccessfully, if such there are.—Ed.]

Bee-Keeping in Texas.—Jno. A. Emison, Mission Valley,+○ Tex., on July 21, 1886, wrote:

After five year's experience in the handling of bees, I find much written in the bee-papers and bee-manuals that will not do in Western Texas. Experience though often a hard tutor is the one most to be relied upon. There is a universal wail going up from Western Texas. There is not one pound of surplus honey, and most of the colonies have died from starvation. I have 40 remaining out of 120 in May. The cause was a cold, backward spring, followed by a drought, and the failure in the horse-mint. I might for emphases of distress say tetotal failure of mint. My experience has been, no mint, no surplus honey. Thanks to a kind Providence the promised later rains came. My 40 colonies are now on a perfect "boom" from daylight until night, which puts a stop to their flight. I have been impressed with this fact, as brought to my notice by this sad loss in my apiary, viz: The fitness of the black bee for this locality. I was congratulating myself upon having my apiary so nearly Italianized, but out of 6 pure black colonies I lost but one. My strongest colonies are the remaining 5 blacks. The advocates for Italians contend that they work earlier and later in the day, hence are better honey-gatherers. I do not find it so, but the reverse. The great objection I have to the black bee is its disposition to rob. I am in no wise discouraged. I have had quite a lot of comb to render. I wish to thank Mr. Demaree for the light he gave in the Query Department on the subject of wax-rendering. In fact I find more information boiled down to a few words in the "Queries'" than I ever found in all the profuse and verbose articles. It is the wheat without the chaff.

Bloom in Mississippi.—L. J. de Sobotker, Riverton,+○ Miss., on July 6, 1886, says:

The weather has been and is still very pleasant for the gathering of nectar. We have now in full bloom all around us the Indian corn, and the bees are very busy on the tassels, extracting the nectar, which is a very clear and fine flavored sweet; but not having a tin evaporator prevents me from taking this delicious honey separately, and as there are also several other blooms at present there might be some difficulty in doing this, although by examining the surplus combs in the second story of the hives, the corn honey can be distinctly known, especially when having noticed the direction of the flight of the bees to the surrounding extensive cornfields on the eastern side of the apiary; on the north, south and west is woods. The other bloom is, button-bush, alders, milk-weed, white clover, red clover, and a variety of others, their names, as yet, unknown to me; also a few magnolias, these latter having been planted and cultivated here, although about a hundred miles further south there was pointed out to me a place called Magnolia Bluff, where they grow in great abundance. There is no lack of variety of bloom at present, still I find that the gathering is not in proportion to the strength of the colonies. Occasionally we get a natural swarm, but they get so high up on large trees that they cannot be taken and hived in this busy season, with 142 colonies for one man.

Convention Notices.

☞ The Cortland Union Bee-Keepers' Association will hold a basket picnic at Little York, N. Y., on Wednesday, Aug. 18, 1886. All interested in bee-culture, with their families, are cordially invited to attend and have a good time.
D. T. Shattuck, *Sec.*, Homer, N. Y.

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. Hambaugh, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. Cutting, *Sec.*

☞ The next meeting of the Stark County Bee-Keepers' Society will be held in Grange Hall, at Canton, O., on Aug. 31, 1886. M. Thomson, *Sec.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS.
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

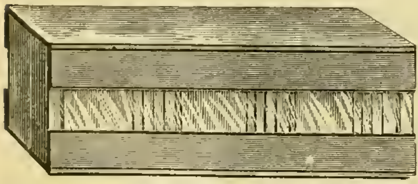
To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.



◆

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, $1.00; Tested, $2.00; 6 Tested Queens for $9.00. Orders filled **at once.**

◆

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at **$6.00** each.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches. — We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

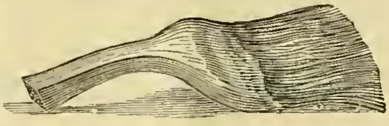
Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result —a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Series of Articles by prominent men of the country in the **Graphic News,** of Cincinnati, is attracting great attention and the best and highest praise. In the issue of July 31st, the Hon. Cassius M. Clay, of Kentucky, Ex-U. S. Minister to Russia, and one of the ablest statesmen of the land, will write upon "Forests and Rainfall." The subject is an especially interesting one, and is most effectively handled. In the issue of Aug. 6th will be printed a lithographic supplement of Mrs. Gov. Foraker, of Ohio, the first of a series of portraits of prominent people.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable.



When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen

◆

Frank Leslie's Popular Monthly for August gives a most attractive sketch by George Makepeace Towle of "The Nestor of Europe," the Emperor William of Germany. Daudet's sketch of "Tartarin in the Alps," and stories like Towner's "Hermon Drake's Ashes," Boutelle's "The Lost Lady," "An Unknown Name," and "A Scrap of Paper," will certainly tempt readers. Laura C. Holloway gives a very readable account of Lady Burdett-Coutts, the philanthropist; Lucy H. Hooper, the queen of correspondents, tells of the "Water Supply of Paris"; "A Ship-Portage from Sea to Sea" is an able discussion of the merits of the proposed ship-railway at Tehuantepec. F. C. Valentine tells us of "Central American Women," and Prof. Eaton discusses the important subject of "Fresh and Foul Air."

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 2, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—It is coming on the market very freely this week, and there are advices of other lots at this time in transit. We are practically without any demand, so prices are nominal. Offers of 12@13c. would be accepted; yet 14c. is being asked.

BEESWAX.—Scarce at 25c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The present quotations are as follows: Fancy white comb in 1-lb. sections, 10@12c.; fancy white comb in 2-lb. sections, 8@10c; buckwheat in 1 and 2-lb. sections, 5@8c; extracted white clover, 8c; extracted, California, 4½@5c; extracted, Southern, per gallon, 45 to 55c.

BEESWAX.—23 to 28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—New honey is coming in quite freely, and is bringing from 11 to 13c.

BEESWAX.—Firm, at 25 cts. per pound.

M. H. HUNT., Bell Branch. Mich.

CINCINNATI.

HONEY.—The demand for extracted honey has been very light of late, but it seems to be improving gradually for manufacturing purposes. There is considerable honey in the hands of commission merchants, and prices are very low—3½ to 7 cts. per pound is the range of prices. Prices of comb honey are nominal.

BEESWAX.—Arrivals are good and the demand fair. We pay 18@22c. for fair to choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The receipts of new honey are good and very fine. The demand is good and stocks in store are light of one-pound sections. We quote: 1-lb. sections of white clover, 14@15c.; 1-lbs., dark, 11@12c.; 2-lbs., white clover, 11@12c.; 2-lbs., dark, 8@9c.; California white 2-lbs., 10@11c.; dark, 8@9c Extracted white clover, 5@6c., dark, 3½@4c.; California white, 4½@5c.; dark, 3½@4c.

BEESWAX.—20 to 22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is fairly supplied with honey, trade is dull, prices depressed, and the outlook is for a large production. Already some is being peddled about the city by the producers themselves, demoralizing the prices, which should not be done. We quote: Choice white in 1-pound sections, 14@15c.; 2-lbs. 13@15c. Dark honey not wanted. Extracted, white, in barrels and kegs, 5@7c.; in tin cans, 6@8c.; dark in barrels or kegs, 4@6.

BEESWAX.—25c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The prices of honey on this coast are now so low that producers can hardly make any profit, and a good many apiarists will quit the business if prices do not improve soon. The crop is large, and the quality of very choice quality. We quote 3½ to 4¼c. in a jobbing way, and perhaps a trifle more; but if holders wish to force sales, lower prices must be taken. Comb honey sells slowly at 6 to 9c., but just now it is not the season for comb honey, and prices may improve.

BEESWAX.—Is generally held at 22 to 23c. for average. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—New honey is coming forward freely. The quality is exceptionally fine and the crop will be large. White to extra white comb, 9@11c. Extracted, 4@4½c. for white; 3½@3¾c. for amber.

BEESWAX.—22@23c.

O. B. SMITH & CO., 423 Front Street.

◆

Our Catalogue of Bee-Keepers' Supplies will be sent to any one desiring to get a copy. Send name and address, plainly written, on a Postal Card for it.

Advertisements.

WILL sell 400 full Colonies of Bees in lots to suit buyer; or will sell Apiaries already stocked up. **Now is your time.**
Address, **H. R. BOARDMAN,**
28Atf EA. TOWNSEND, Huron Co., O.

ROOT'S Simplicity and CHAFF HIVES, Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand.
Address, **E. R. NEWCOMB,**
PLEASANT VALLEY, Dutchess Co., N. Y.
27A8t

FINE Tested Italian Queens of this year's breeding, for $1 each; Untested Queens only 65 cts. each, by return mail. Hives and Sections at rock-bottom prices.
B. J. MILLER & CO., Nappanee, Ind.
29Atf

STRONG Nuclei—with Tested Italian Queens and full-sized frames. 2 3-frame Nuclei, $5.00; 10 3-frame Nuclei, $23.; 2 4-frame, $6.; 10 4-frame, $25.00. Also Full Colonies cheap. Address,
31D2t REV. J. E. KEARNS, Morning Sun, Iowa.

I CAN use a few thousand pounds of Extracted Honey of good quality, if cheap. Address,

H. R. BOARDMAN,
28Atf EA. TOWNSEND, Huron co., O.

BEE Hives and Sections—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

---

TESTED Queens, (Imported Mother), $1.25 each; $12 per doz.-O. N. Baldwin, Clarksville, Mo.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Sections and Berry-Baskets.

WE, the *original inventors* of the one-piece Sections, are now prepared to furnish Sections and Berry-Baskets in any quantity. Please write for terms. **M. & H. F. COFFIN,**
28A4t MILTON, Trimble Co., KY.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

BEE-SUPPLIES

Established in 1864.
WHOLESALE
AND
RETAIL.

WE have the largest steam-power shops in the West, exclusively used to make EVERYTHING needed in the Apiary, of practical construction and at the LOWEST PRICES. Italian Bees, Queens, 12 styles of Hives, Sections, Honey-Extractors, Bee-Smokers, Feeders, Comb Foundation, and everything used by bee-keepers always on hand. Illustrated Catalogue FREE to all. Address,
31-35-39 **E. Kretchmer, Coburg, Iowa.**

QUEENS FOR SALE or EXCHANGE.

"Jerseyville, Ills., July 23, 1886.—Mr. J. T. Wilson: Dear Sir—The 55 Italian Queens that I bought of you last year were all purely mated except one. The most of them were Choice Queens, and just as good as higher priced ones, for general purposes.—E. Armstrong."

One Queen, 75 cts.; 6 for $4.00. Will work as well on red clover as anybody's Queens. I will exchange for Honey, Alsike Clover Seed, or for Poland China Hogs. Address,
31A1t **J. T. WILSON, Nicholasville, Ky.**

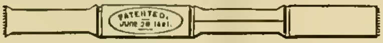
Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

Prices Reduced.

THE "BOSS" ONE-PIECE

SECTIONS.


PATENTED JUNE 28 1881.

Patented June 28, 1881.

WE have REDUCED the PRICES on One-Piece Sections as follows:

One-Pound Sections, In lots of **500 to 3,000,** ℔ 1,000, **$4.00**

☞ For larger orders write for prices. ☜

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., April 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

BEES, QUEENS,

AND

APIARIAN SUPPLIES.

First-Class Goods at Low Prices.

A FINE LOT OF ITALIAN BEES
For Sale Cheap.

Send Postal Card for Illustrated Circular and Price-List.

J. C. SAYLES.
13Dtf HARTFORD, WIS.

American Apiculturist,

PUBLISHED under the management of one who has had 30 years' practical experience in Bee-Culture.

Send your address on a postal card for a Sample Copy. Address,

AMERICAN APICULTURIST,
27Ctf WENHAM, MASS.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to

A. I. ROOT, Medina, Ohio.

HEAD-QUARTERS IN THE SOUTH

For the manufacture of

Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

ITALIAN QUEENS, by Return Mail, Tested, 1.00. Untested, 75 cents.
26Atf **GEO. STUCKMAN, Nappanee, Ind.**

Golden Italians.

WARRANTED Queens 75 cts. each; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,
JAMES WOOD, North Prescott, Mass.
20A20t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

TWO HUNDRED

Select Tested Italian Queens!

Large, Handsome and Extra-Prolific Queens

$1.50 Each, or Three for $4.00,

By return mail. Safe arrival guaranteed. Make Money Orders or Postal Notes payable at Salem, Mass. Address, **HENRY ALLEY,**
29Atf WENHAM, MASS.

THE

Center Table.

Literary and Educational.

A CRISP and charming Monthly. Well edited, clearly printed, and pleasingly illustrated. **Prize Contributions.** Send stamp for sample, or better still send fifty cents and get the paper for one year. You will be amply repaid. Address,

DUGALD McKILLOP,
31C6t 152 John St., CINCINNATI, O.

HOW TO RAISE COMB HONEY,

AN ILLUSTRATED PAMPHLET just out, by Oliver Foster, describing improvements in methods resulting from 10 years' practical work and extensive experiment, Price, **5 cents.**

Also, send for *Free* Circular of Italian Bees and Queens, bred for Honey and for Sale. The "Adjustable" Honey-Case, and other Standard Supplies for the Apiary.

Address, **OLIVER FOSTER,**
21Ctf MT. VERNON, Linn Co., IOWA.

BARNES' FOOT-POWER MACHINERY.

Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 484 Ruby St., Rockford, Ill.

HUMPHREYS'

HOMEOPATHIC
SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5.
SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1A1y Agricultural College, Mich.

CONDENSED PRICE-LIST OF BEE-KEEPERS' SUPPLIES

FOR SALE BY

Thos. G. Newman & Son,

923 & 925 West Madison Street,
CHICAGO, ILLS.

Our Illustrated Catalogue (36 pages) sent *free*, upon application.

HEDDON'S NEW HIVES.

SAMPLE HIVE **$4.00.** This includes the bottom-board and the stand; a slatted honey-board, and a cover; two 6-inch brood-chambers, each containing 8 frames; 2 surplus arrangements, each containing 28 1-lb. sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is nailed and painted, ready for immediate use.

For Hives Ready to Nail, see our Catalogue.

LANGSTROTH HIVES.

BROOD chamber with portico and 7¼ in. cap, 10 frames, nailed, not painted $1.25. Material, in the flat, 90c. each. With movable side, $1.75; in flat, $1.30.

We also make our 7¼-inch caps with a sloping or cottage roof—price 15 cts. nailed and 10 cents flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

LANGSTROTH FRAMES.

MATERIAL (9⅛x17⅝ in., outside) per 100, $1.25. Per 1000, $12.

SUPERS for Comb Honey.

STORY (32 1-℔. sections) nailed, 75c. Material, in the flat, 50c.

Story (24 2-℔.) same price as above.

Story (7 wide-frames, with 21 2-℔. sections and separators) nailed, 75c. Material, in the flat, 60c.

Story (7 wide frames, with 56 1-℔. sections and separators) nailed, $1.50. Material, in the flat, $1.05.

Comb-Honey Rack (18 2-℔. sections, separators and glass) nailed $1, flat 50c. Rack without sections, &c. 35c. flat 15c. Rack material, in the flat, by mail, 75c.

HIVE CLAMPS.

FOR securing loose bottom-boards, VanDeusen's, sample set, by mail 15c One or more, by express, 10c. each.

Ackerman's—Sample set, by mail 20c. One or more, by express, 15c. each.

SECTIONS for Comb Honey.

ONE-PIECE (Forncrook).—Of these we keep in stock the 4¼x4¼ in. size holding 1℔. and 5¼x6¼ inches, holding 2℔., a trifle *less* than 2-inches wide, with narrow or wide tops; also, both sizes 1¾ inches wide, with narrow tops.

		4¼x4¼	5¼x6¼
1,000	Sections	$4.00	$4.50
500	"	2.25	2.50
250	"	1.25	1.50
100	"	60	70

Odd sizes, 5x6 or less, (not less than 500 made) $3 for 500; $5.50 per 1,000.

DOVETAILED, four-pieces, 5¼x6¼, wide or narrow tops, and 4¼x4¼ with narrow tops only, (all *scant* 2 in. wide). Prices same as the above.

PRIZE—to be nailed—are of 2-lb. size only. Prices same as the above.

HONEY CARRIAGE,

REVOLVING Comb Hanger, Tool Box and Recording Desk, combined. Price, complete, $18.00.

BARNES' SAWS.

A COMPLETE illustrated catalogue and price-list of these machines will be mailed free, upon application.

ATOMIZER.

TO change the scent of bees when introducing Queens, uniting or dividing colonies, making nuclei, etc. Price, 75c. Mailed for 10c. extra.

SWARM CATCHER.

BAILEY'S swarm catcher consists of a frame-work, made of wood and covered with wire-cloth, which can be set at any angle. By its use, with a queen cage, a swarm can be compelled to stay in any hive, until the swarming-fever is over. Price $3.80.

COMB FOUNDATION.

WE keep three sizes in stock, viz: 12x18, 8x16½, and 10x11 inches. Special sizes, in a week, at same prices, which may be changed without notice.

1 lb., by mail, (small sheets)	65c.
10 " or less, by express, ℘ lb.,	40c.
25 " " " "	39c.
50 " " " "	38c.
100 " " " "	37c.

Thin, *for comb honey,* **10c.** ℘ ℔. *extra.*

Extra Thin, (VanDeusen's *flat-bottomed* or Vandervort's) **20c.** ℘ ℔. *extra.*

Wired, (8x16½ or 10x11 in.) 1 to 25 pounds 60c. ℘ ℔.; 25 to 100 lbs. 58c. ℘ ℔.

COMB FOUNDATION MILLS.

WE can furnish any of the Comb Foundation Machines, or the Given press, at manufacturers' prices.

FOUNDATION CUTTER.

Small size (tin wheel)	10c
Large size (steel wheel)	75c

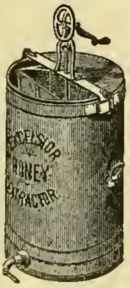
When wanted by mail, add 2 cents to the former, and 5c. to the latter price.

SHIPPING CRATES.

MATERIAL for 50 crates (to hold 12 2-℔. sections) no glass, $4.75. A sample nailed, with sections, 50c.

Material for 50 crates (to hold 24 1℔. sections) no glass, $6.00. Sample, 60c.

HONEY EXTRACTORS.



THE **$8** and **$10** sizes are made to suit those who desire a cheap but practical machine. The cans are smaller, the sides of the baskets are stationary, and they have no covers, strainers, or metal standards.

Being made entirely of metal, they are very light and durable, and have lugs for firmly fastening to the floor.

Those who want the BEST honey extractor are referred to those who are now using the Excelsior.

For 2 frames,	13x13	inches	$ 8 00
For 2 "	10x18	"	8 00
For 3 "	10x18	"	10 00
For 4 "	10x18	"	14 00
For 2 "	13x20	"	12 00
For 3 "	13x20	"	12 00
For 4 "	13x20	"	16 00

The 3-frame basket is in a can of the same size and style as the 2-frame. The 4-frame basket is in the larger can; the latter 4 have metal standards for the basket to revolve upon, leaving room underneath the basket for 50 or 80 pounds of honey.

EXCELSIOR Wax Extractor.

WE make two sizes, the smaller one having a larger capacity than the Swiss Wax Extractor. Prices, small size, **$4**; large size, **$5.00**. Some of the advantages of this Extractor are:

1. It is more easily operated, there being no necessity for removing the top to re-fill with water.
2. It melts the wax quicker, because it is brought into a more direct contact with the steam.
3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.
4. The filler for water acts also as an indicator, showing the amount of water in the boiler; when the steam escapes through the filler, more water is required. Keep a kettle of hot water ready to re-fill when required.

PURE PHENOL.

FOR the cure of **Foul Brood,** used by Mr. Cheshire, of London, England. As it is a liquid, it can be sent only by express. Price, 25c. per oz.

TIN POINTS, for Glassing Sections

SQUARE or V-shaped, 1,000, by mail, 50c. By express or freight, 40c.

SHUCK'S BEE-FEEDER.

FOR feeding bees at the entrance of the hive, any time; it feeds much or little, as may be desired; feed can be reached only by the bees from the inside of the hive. Price, by mail, 30c. By express, 25c. each, or $2.40 per doz.

PERFORATED-ZINC.

DRONE and Queen Excluders.—We carry in stock two sizes: 19¾x14½ inches, for Langstroth hives—price 25 cents each; also in sheets 3x8 feet—24 sq. ft.—price, $2.75 per sheet. We will cut pieces at 15 cents per sq. ft.

HONEY KEGS.

THESE Kegs are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap, and often cheaper. They need no waxing, but should be well scalded with boiling water before used. Do not soak them. Prices:

5 gallon,	to hold	50 lbs.	40c
10 "	"	100 lbs.	60c
17 "	"	175 lbs.	80c

A discount of 10 per cent. on 25, or more; 12½ per cent. on 50, or more; and 15 per cent. on 100, or more, kegs.

LABELS FOR PAILS.

THESE labels are of two sizes, printed on colored paper; they are very attractive, and add greatly to the appearance of the pail when filled and offered for sale. Either size, printed with name and address, at the following prices—(not less than 100 printed):

	Small.	Large.
100	$1 00	$1 00
250	2 00	2 25
500	3 00	3 50
1,000	4 00	5 00

TIN PAILS FOR HONEY.

THE Straight Pails of all sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Samples of the 4 sizes, put inside of one another as a nest, price, 50 cts. by express. Prices:

			Per doz.	Per 100
Gallon, holding	10	lbs.	$1 80	$12 00
½ Gallon, "	5	"	1 50	9 00
Quart, "	2½	"	1 20	7 00
Pint, "	1¼	"	65	4 00

THE Tapering Pails of all sizes have a bail, and on the 25-pound pail a wooden handle is added. These tapering pails are made heavier and stronger than those with the straight sides—the covers are deeper and the top edge of the pail is doubled over, making it smooth and convenient to handle.

Samples of the five sizes, nested, 75 cents, by express, or the four smaller sizes, 50 cts. Prices:

To hold	1℔.	4 lbs.	7 lbs.	13 lbs.	25 lbs
Per doz.	.75	$1,25	$1.50	$2.00	$3.25
Per 100,	5.00	8 00	10 00	14 50	23 00

GLASS HONEY JARS.

THESE Jars, at the following prices, will be shipped from Cincinnati, O.

1 lb., common glass, per gross...	$ 5 00
2 lb., " " " " ...	6 50
1 lb., flint glass, per gross	6 00
2 lb., " " " "	7 50
Corks for same, per gross	75
Tin Foil Caps for same, per gross	80
Labels for same, per gross	75

LONG RUBBER GLOVES.

FOR SIZE, lay the open hand, palm down, on a sheet of paper, and mark the outline of hand and fingers with a pencil. Price, by mail, $1.75.

WOODEN PAILS for HONEY.

WOODEN water pails, well-painted outside, with 3 iron hoops and a tight-fitting wood cover, at $2.25 per dozen. They will hold 25 lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

HONEY KNIVES.

IN using Bingham & Hetherington's Honey Knives only the thin, sharp, beveled edge rests on the combs, and the caps, after being cut off, slide up in large sheets and roll over on the knife, like shavings on a plane. They are 2-in. wide, tempered and finished like a razor, and will last a life-time.

Price, $1. By mail, $1.15.

Muth's Honey Knife, 50c.; by mail 65c.

BEES AND QUEENS.

FULL Colonies of Italian Bees, in Langstroth hives, bred to highest standard of excellence for all the best points, $8.00. Tested Queens, $2.00.

WIRING TOOL

FOR pressing foundation into wired frames—15 cents; by mail, 20 cts.

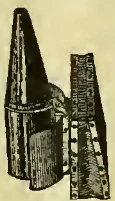
WIRE NAILS.

FOR nailing Sections, Cases, Frames, Racks, Crates, etc. The entire length of the nail being the same thickness, they do not loosen as ordinary iron nails will, and are not as liable to bend or break.

⅜	inch long,	wire No. 20,	per lb...	22c
½	"	" 19,	"	17c
⅝	"	" 18,	"	14c
¾	"	" 18,	"	13c
⅞	"	" 17,	"	11c
1	"	" 17,	"	11c
1¼	"	" 16,	"	10c
1½	"	" 16,	"	10c
2	"	" 15,	"	9c

If wanted by mail, add 18 cts. per lb. for postage. We can furnish larger nails, up to 5-in. long, when desired.

BINGHAM SMOKERS.



THIS is the first and only bellows Smoker ever made which would burn stove-wood. It burns any thing combustible, and needs no care except to be refilled once in one or two hours. It works easily and will throw a stream of smoke ten feet. It will not go out nor wear out. It will save time stings and money.

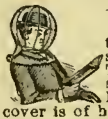
The Doctor	3½	inch,	$2 00
The Conqueror	3	"	1 75
Large, wide shield	2½	"	1 50
Extra Stand, wide shield	2	"	1 25
Plain Standard, nar. sh.	2	"	1 00
Little Wonder, wide sh.	1¾	"	65

Wholesale Rates, on application.

SEEDS for HONEY PLANTS.

White Clover—	per bushel (60 ℔s)	$15 00
" "	per peck. (15 lbs)	4 00
" "	per pound	30
Melilot Clover—	per bushel	$10 00
" "	per peck	2 75
" "	per pound	20
Alsike Clover—	per bushel	$12 00
" "	per peck	3 25
" "	per pound	25
Bokhara Clover, imported, per lb		50
Mignonette—per oz., 20c.—per lb		2 00
Catnip—per oz., 10c.—per lb.		1 00
Motherwort—per oz., 10c.—per lb		1 00
Spider Plant—per oz, 20c.—per lb		2 00
Cleome—Rocky Mountain Bee-Plant—per oz., 15c.—per lb...		1 25
Figwort—or the Simpson Honey Plant—per oz., 20c.—per lb...		2 00

NEW BEE VEIL.



HAS 5 cross bars *riveted* through the center at the top. These button to studs on the neck-band. The bars are light spring steel; the neck-band is of hard spring *brass*; and the cover is of handsome light material. It is very easily put together—no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. It protects against mosquitoes, flies, bees, gnats, etc. The Veil weighs only 5 oz. Price $1.00.

GUMMED HONEY LABELS.

OF these we have 20 styles, and when ordered in quantities of 250, 500 or 1,000, we print the name and address of the apiarist. Prices range from 25 cents for 250, and upwards. Samples sent upon application.

MISCELLANEOUS.

Little Detective Scales, weigh 25℔ $2.50

Honey Gates for Extractors, 75c.

Gearing for Honey Extractors, $1.50.

Handles for Honey Gates, 25c; mail 40c

Novice's Metal Corners, per 100, 50c.

Wire Cloth, painted, 14 mesh, 8c. sq. ft.
" tinned, for Qu. cages, 12c. "
" " for extractors, 15c. "

Glass, 5x6 in., 240 lights in a box, $2.50.
Glass for shipping crates, per 100 lights
2¾x13½, for one-℔. sections, $2.50.
3⅜x16½, for two-℔. sections, $3.50

Whitman's Fountain Pump, $8.

Wire (for fdn.) oz. spools, 4c.; mail 6c
" " 1 ℔. spools, 40c.; mail 58c

Novice's Iron Blocks, for making his metal-corner frames, 15c; mail 25c

Queen Registering Cards, 10c. per doz.

Scissors, for cutting queen's wing, 50c

Ribbon Badges, 10c.; 100 for $8.00.
" rosette and gold lace, 50c

Rubber Sprinkler, $1.00; by mail, $1.10

Parker's Foundation Fastener, 25 cts. by mail, 40 cents.

Bee Veil (common), by mail, 50 cents.

Metal Rabbets, per foot, 1½c.

Registering Slates, 50 for $150;—100 for $2.50. Sample, by mail, 10c.

Felt Blankets, 35c. per lb. by express.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Aug. 11, 1886. No. 32.

The Illinois State Fair will be held at Chicago, Sept. 6-10, 1886. The Premium List can be obtained of Chas. F. Mills, the Secretary, at Springfield, Ills., or at this office. The premiums on bees and honey amount to $39 and a diploma. The Editor of the BEE JOURNAL has been appointed to award the prizes in that department. We hope that there will be a good display—a thing unknown for many years past.

◆

The Guide Book for Bee-Keepers, by Mr. Thos. W. Cowan, F. G. S., F. R. M. S., etc., editor of the *British Bee Journal*, has been translated into the French language, by Mr. Ed. Bertrand, of Nyon, Switzerland. We have received a copy, with the compliments of the author, and also the translator. It is a book of 180 pages, nicely printed and illustrated. It will greatly help French-speaking bee-keepers, as it is fully up with the times.

◆

Monsieur Hamet, editor of the *Apiculteur*, whose serious illness was recently mentioned in our columns, was so far recovered a little while ago, that he had decided to resume his classes at his practical school in the Luxemburg Gardens. On his way thither, however, and while still near his residence, he was run over by a carriage, a wheel of which passed over his left leg, without, however, breaking any bones. He had to be taken home in a cab and compelled to keep quiet for about eighteen days. He has now been able, although with evident difficulty, to resume his school duties, and there is every hope of an early recovery.—*British Bee Journal.*

◆

The American Apiculturist has again changed hands, this time Mr. Henry Alley is the possessor. The August number was out on time, and is full of excellent matter. As Mr. Alley has been editor of it for months, practically there is no change. The AMERICAN BEE JOURNAL wishes it success, as it does every periodical that harmoniously works for the good of the pursuit.

Join the Bee-Keepers' Union.—The *Bee-Keepers' Magazine* for August contains the full "Report of the General Manager," and also the following editorial remarks concerning it :

> In another column will be found the report of the General Manager of the Bee-Keepers' Union. We commend it as a good, sound document, showing Thomas G. Newman, Esq., to be a person eminently fit to hold the position he does. *Join the Union.*

Messrs. Aspinwall & Treadwell, the editors of the *Magazine*, are each members of the Union, and have given it their very cordial endorsement. The only thing that causes us surprise is the fact that the Union has not now at least five or six thousand members. It is to the interest of every bee-keeper to do as the *Magazine* suggests, viz : "Join the Union." It is no personal advantage to the Manager ; the energies he has devoted to the Union have been purely gratuitous, and have been cheerfully rendered for the welfare of the pursuit.

Now, reader, a word to you. From ten to twenty thousand bee-keepers will read this, and every one of you ought to become members *at once.* It is to your interest to do so. It is your duty to do so ! How many of you will send on $1.25 for yearly dues and one assessment for the defense fund ? *Let us see !*

◆

Several have written to us for names and addresses of good, responsible commission houses that handle honey. We must, however, be excused from doing so, for this reason : About seven years ago a bee-keeper made a similar request, and we referred him to a commission firm, the senior member of which we had known for many years. We stated this fact, and said we believed him to be honest and reliable. The honey was shipped to that firm, and just at that time the senior member was taken sick, and for months could not leave his residence. Meanwhile the other members of the firm became disgusted, sold out the goods on hand (including the honey), and left for parts unknown.

Our correspondent claimed that he should not have shipped the honey to that house but for our endorsement, and as he could get no returns from the house, he should look to us for the pay—that we were morally, and perhaps legally responsible for it.

After considerable correspondence, and thinking that the commission-man would soon arrange matters and start in business again, we paid for the honey. But though seven years have elapsed, not a cent of it have we ever received—the commisson-man claiming that he was ruined by the stealing of his partner while he was sick.

Therefore, excuse us ! And at the same time take our advice, and do not ship the honey at all. Create a home market for it. It will bring nearly double the prices now ruling in the large commercial centres. You will save the freight charges and breakages, and it will be better for many other reasons. *Sell it at home.*

◆

Bees have for some time held undisputed possession of the Christian church at Harmony, Ills. The citizens gathered on Wednesday, Aug. 4, 1886, and tore off the siding from the foundation to the roof, disclosing a mass of honey 16 feet in height.

Still Another Lawsuit.—Mr. C. C. Richardson, of Tipton, Ind., has been sued for maintaining an apiary on his land, which is declared by the complainant to be a nuisance. Mr. Richardson gives the following information concerning it :

> I find myself involved in an action for maintaining a public nuisance on account of my bees. The facts in the case are these: For the last two seasons I have kept my bees on an adjoining lot to the complaining witness. Last season my apiary consisted of some 40 colonies ; this season some 60 odd. However, I have built up my apiary in the same block they occupy now. A public street continually traveled is on the west, and an alley on the south, much used. I have had no complaint from teamsters, passers-by, or the neighborhood, except by the complainant. But on the contrary my apiary is much admired by the public, and passers by frequently stop to watch me manipulate the bees.
>
> The lot that I occupy has no shade trees or shrubs on which the bees can cluster, while the complainant's lot has many trees on which the bees will cluster when they go in that direction ; otherwise they cluster on the shade trees along the street. Last season the complainant objected to the bees clustering on his trees, claiming that it would injure them, though I removed them very carefully. I tried the sweetening process ; it worked charmingly, so much so that at the close of the season he came to the conclusion that he must have a colony, provided he could spare the money to pay for them. This season, however, war was inaugurated long before the time for the sweetening process to commence.
>
> Since then we have heard nothing but exclamations about "horrid bees" from that quarter, and an effort on their part to stir up the neighborhood against my bees. About the middle of June the complainant gave me orders to move the bees, or he would prosecute me. I could not move them then, and do not feel disposed to do so now, unless there was a general complaint.
>
> I should have stated that a number of parties are keeping bees in our town ; one apiarist, with his bees, being located within half a square of the complaining witness.
>
> My house is surrounded on three sides with bees. We keep our doors and windows open continually during the hot weather. The bees do not bother us, and I cannot believe that they bother the complainant only as stated above. Bees have always been kept in our thriving little city, during my residence of 21 years, though without success as apiarists. As far as I know, I am the only successful bee-keeper in the county. I am proud to say that I have made a success the last five years in the bee-business, though I have not resorted to selling either bees or supplies.
>
> In connection with my bees I follow sprouting plants for the trade and gardening. During the season for bees to fly there is almost a continual string of callers for plants and honey. At least two thousand callers during the season for the last five years, I think would be a low estimate, and but one has been stung out of that number.

Mr. Richardson desired to know what the Union would do to help him to defend the suit, as he was one of the first to join the Union. The Manager has made arrangements to have a good attorney defend the suit, and hopes to prevent malice from gaining a victory over right and old age.

◆

When Marketing Extracted Honey, it is a sad *blunder* to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Swarms Returning.

Query, No. 289.—What causes a swarm of bees to return to the old hive after being hived?—J. L. P.

Probably the old queen did not go out with them.—A. J. COOK.

"Dissatisfaction" in many cases. Sometimes they do not get the queen with them.—H. D. CUTTING.

Perhaps the queen did not go with them.—C. C. MILLER.

If the queen was not with them they would return.—W. Z. HUTCHINSON.

Usually it is the queen that is missing.—DADANT & SON.

Usually failure of the queen to go with the swarm, or to stay with it, if she did go.—JAMES HEDDON.

They have no queen with them, or else she is balled by a few strange bees, so the bees fail to realize that their queen is there.—G. M. DOOLITTLE.

The queen either failed to go with the swarm, or was lost. There may be a few exceptions to this rule, but it is correct in ninety-nine cases in a hundred.—J. P. H. BROWN.

The only cause I know, is that the queen did not accompany the swarm, or else was lost in hiving it.—J. E. POND, JR.

The queen may be killed in the operation of hiving; she may be unable to fly, as is often the case, and be lost; or she may not come out of the hive at all. In either of which cases the swarm will return to the old hive.—G. L. TINKER.

The most common cause is that they miss their queen and return home because that is the best they can do. I have known a queen to be unable to go with the swarm on two or three occasions, and then succeed at last. A neighbor of mine hived a swarm three or four times this season before the queen succeeded in going with the swarm. If swarming is delayed until the young queens begin to hatch, one or more of them may go with the first swarm, and a swarm with more than one queen may do almost anything.—G. W. DEMAREE.

Destroying Drones and Drone-Brood.

Query, No. 290.—I have a strong colony of Italian bees at work in the surplus boxes that, a few days ago, killed off all the drones in the hive and carried them out, and are now carrying out the drone-brood. The white clover season has just commenced, and is growing better every day. What was the probable cause?—Manchester, N. H.

The cause was undoubtedly lack of nectar in the flowers.—H. R. BOARDMAN.

They propose to run for honey. Such are just the bees to breed from.—A. J. COOK.

I do not know, unless there was a dearth of honey-yielding.—JAMES HEDDON.

They may have given up the idea of swarming.—W. Z. HUTCHINSON.

Probably just at that time the clover yielded little or no honey, although you thought that it was.—G. M. DOOLITTLE.

The cause was a honey-dearth at the time it was done.—DADANT & SON.

It was caused either by a dearth of honey or the bees abandoned for the present the idea of swarming.—J. P. H. BROWN.

Very little honey coming in was the cause. I have seen in this locality the ground covered with white clover and not a drop of honey from it. I then commenced feeding and they stopped killing drones.—H. D. CUTTING.

A few days of unfavorable weather or temporary failure of nectar secretion will often cause bees to fear the worst and destroy the drones and drag or drive out those just hatched. Rarely they carry out the immature larvæ upon a complete failure of the flowers.—G. L. TINKER.

"Bees do nothing invariably." The honey season might have commenced just after they killed the drones, but the carrying out of drone-brood while gathering honey freely, is one of those unaccountable things that no one can tell anything about.—J. E. POND, JR.

The probable cause is that there was a dearth of nectar just before white clover bloomed, and the bees were discouraged and commenced to banish their drones; and having commenced the persecution they did not know when to quit. If you remove the queen when a colony is persecuting their drones the bees will keep it up for several days before they seem to realize their condition.—G. W. DEMAREE.

Sometimes bees kill off all drones as soon as a newly-reared queen gets to laying. It would be nothing strange if your bees had superseded their old queen just before clover bloom.—C. C. MILLER.

Fastening Combs to Separators.

Query, No. 291.—Why do my bees fasten combs to tin separators, more so this year than usual? What must I do to prevent them from so doing? I use 2-inch sections and comb foundation.—F., Mich.

Use clean tin. If the tin is old, rub over the surface lard or butter.—H. D. CUTTING.

A few of my colonies used to do this, but a change of queens has apparently stopped it.—G. M. DOOLITTLE.

Our bees do so very little this year. Is it not because you gave them so little room that they were much crowded.—A. J. COOK.

Use sections not more than 1¾ inches wide. I get nice sections of honey without separators, but I use a section-case only one tier deep, and sections not wider than 1¾ inches. Improved section-cases will banish separators.—G. W. DEMAREE.

In my experience I find bees more prone to stick the combs when 2-inch sections are used than when sections approach nearer the natural distance of near 1½ inches from septum to septum. I much prefer sections of 1⅝ or 1¾ inches in width, to 2 inches in width.—J. P. H. BROWN.

A weak colony or one working slowly will fill one side faster than the other, thus pushing the bottom of the foundation to one side. Level your hives from side to side, have strong colonies, and then hope for a rapid flow.—C. C. MILLER.

In a good honey-flow, if bees have insufficient room to store surplus, or the cases of wide sections are not tiered up soon enough, the bees are apt to build brace-combs to separators. If honey is coming in rapidly the cases of sections should be tiered up as soon as a good start is made in them. This course will not only prevent largely the building of brace-combs between the cases, but the evil complained of.—G. L. TINKER.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ↖O northwest: O↘ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Experience and Experiment.

G. W. DEMAREE.

The honey crop will be short again this year in Kentucky, and perhaps in all the Middle States as a general thing. Our bees in this State came through the winter in a weakened condition; never were my colonies so weak in the spring as they were early last spring. But favorable weather brought them forward rapidly, and swarming commenced as early as usual. The honey season was really good until about half way through the usual period of time in which black locust and white clover yield nectar in quantity to furnish surplus, and then unfavorable weather set in with prevailing north and east winds, and the honey-flow was at an end.

Early in July we had a few mornings that gave our bees a lively time gathering the *so-called* honey-dew, the first thing of the kind that I have observed for several years. The insects producing this sweet liquid substance were not the ordinary scale or bark-lice which produce the black, filthy stuff, so appropriately called "bug-juice" by a number of writers in the bee-papers, but is a lively little insect of a pale yellow color, has six well-formed legs, large compound eyes, between which are located the long, slender antennæ that are nearly always in motion. A beautiful pair of gauze-like wings extending beyond the extremity of the abdomen completes the external appearance of this strange little honey aphis. They are so very small that it requires a glass of considerable power to exhibit the insect to good advantage. Frequently while I had a specimen under a Coddington lens it would spread its gauzy wings and fly away, or walk gracefully out of the range of the glass.

I saw them nowhere but on the leaves of the black walnut. They were found on the under side of the leaves, while the tops of the leaves, many of them, had a glazed, shiny appearance to the unaided eye, but when put under the glass they presented the appearance of being sprayed with a transparent liquid as clear as water, and sweet to the touch of the tongue.

While the dew was on in the morning, the bees would hurry over the leaves licking up this dew-like substance with the greatest eagerness. I should have no fear of this aphis honey injuring my bees, though it was ever so abundant.

I have discovered some things this season that I do not remember of seeing in print or of hearing them mentioned by any one. One of which is the fact that young queens sometimes, perhaps 3 per cent. of them, have their heads turned the wrong way in the cells, and being unable to cut through the base of the cells they perish in the cells. In case of retarded hatching I discovered by opening a cell that a well-formed and perfectly-developed queen was in this predicament. I rescued her from her entombment and set her at liberty. This circumstance led me to making close observations, and I have since found two more queens reversed in the cells.

THE SUN WAX-EXTRACTOR.

This is the third season that I have operated a sun, or solar wax-extractor, and when properly made I know of no device that will do its work so cheaply and so well as the sun wax-extractor. Of all the methods that I have tried the sun wax-extractor is the only device that will separate the wax cleanly from old, and pollen-filled combs, scrapings, etc. It would surprise any one to see how much honey can be extracted from the cappings after they have been well drained in the uncapping-can, by subjecting them to the heat of the sun in the sun wax-extractor.

To make the device work well the pan that holds the combs, cappings, etc., must be made in the form of a half-cylinder, with the back end closed while the front or drip end is left open. This circular shape of the pan or bottom of the extractor permits the wax to drain from the refuse of the combs much more readily and cleanly than can be the case when a flat pan with elevated rim is used.

A sash that will just take three panes of glass 12x20 inches will furnish heat sufficient to render all the wax that is ordinarily produced in an apiary of 100 colonies. The glass should have nothing between them to cast a shadow; just let the edges of the glasses fit close together. The sash to my sun wax-extractor is made of ⅞x2 inch stuff, so made as to stand on the frame-work like a shallow box 2 inches deep. It has a shallow rabbet at the top to receive the glass, which are secured in place by tin points. The sash is made to slide between guides, so that it can be shoved backwards and forwards. The frame-work is simply a box with four legs like an old-style bee-hive. The proper pitch of the draining pan is obtained by blocking up or letting down the back end of the frame-work.

It would astonish any one who had never tried it, to see how much heat will be generated by this device on a clear, hot day. My apparatus will melt and run down a cake of wax 3 or 4 inches thick in a few hours; and if robber bees rush in when the sash is slid back for any purpose, a few feeble struggles ends their existence.

I am quite sure that when bee-keepers learn how to make and use the sun wax-extractor it will take the place of all other devices for common purposes.

THE TIERED BROOD-CHAMBER.

I have again this season employed a limited number of my shallow extracting-cases for brood-chambers, using two of them, tiering one on the other. My extracting-cases are 5¼ inches deep, taking frames 4⅞ inches. The top and bottom bars of the frame are made to project ⅜ of an inch beyond the end-bars, and are held in a central position in the case by means of folded strips of tin inserted in saw-cuts 3-16 of an inch from the top and bottom of the case, thus leaving a shallow bee-space at the top and bottom of the frames. The strips of tin at the bottom of the case are nailed fast, while the two top strips are movable. This makes the frames movable, and the case reversible.

The idea of a shallow bee-space at the top and bottom of the frames and section-boxes originated with myself, though I notice that this idea is prominent in Mr. J. M. Shuck's patent hive, a sample of which I have in my apiary; but I suppose that Mr. Shuck does not claim this as his property, as it would be impossible to define what a "bee-space" is, in actual measurement.

After trying the double-brood-chamber hive pretty thoroughly, I feel sure that it will never come into general use. Those who wish to manipulate all the honey out of the brood-nest into the surplus department, with the view of feeding cheaper food than honey to their bees for winter stores, and have no qualms of conscience if some of the "cheaper food" does go into the surplus at the beginning of the early honey harvest, will probably hold on to the tiered brood-chamber for sometime to come, or until the honey business is well nigh ruined. It costs more to make a hive in two parts. It requires more time and labor to manipulate a double-brood-chamber, for double the number of frames must be handled, if the frames are to be handled at all, and if not, then the movable frame is a useless expense.

There are some serious defects about the double brood-chamber that seems not to have attracted attention at this early stage of its use. If you wish to have queen-cells built, or wish to save the cells after a swarm issues, you will generally find the best cells built from the lower edge of the upper tier of combs and extending down through the bee-space and attached to the top-bars of the lower tier of combs, so that when the two divisions are separated the cells are torn to pieces. The same is true of the worker brood; bees are most likely to build bits of comb between shallow departments, and as the worker brood reared in shallow frames —especially in the lower tier is usually crowded up to the top-bars, the worker brood is not unfrequently torn and mutilated when separating the divisions of the brood-chamber.

But the greatest objection of all is the certainty of having your apiary in a starving condition at the close of the honey season, and that without enough honey over and above what may be obtained from the single brood-chamber hive to compensate for the heavy loss sustained where feeding back to bees honey that has been taken from them, to say nothing of the delirium of excitement, and consequent wear on the bees at a time when nature designed that they should be quiet.

I believe that a large majority of bee-keepers will agree with me when I say that no greater calamity can overtake the bee-keepers than a starving apiary at any season of the year. It is mighty easy to say "feed them," certainly it is, but feeding must be done at a heavy loss of stores, and at a loss in every way.

Christiansburg, Ky.

Pacific Rural Press.

Arrangement of the Hives.

WM. MUTH-RASMUSSEN.

In laying out the grounds for an apiary, and at the annual addition to the same, it is of considerable importance how the hives are arranged, both in their relative position toward each other and toward the honey-house and other objects on the ground. I will proceed to point out, first, the way in which they should not be placed; second, the different ways in which they may be arranged, both in regard to the safety and comfort of the bees, and also in regard to the convenience of the owner.

Hives should not be placed too near each other, as there is danger of the bees (particularly the younger ones) entering the wrong hive and being killed as intruders; also of the queens making the same mistake when returning from their "wedding trip" or in swarming, when a queen with clipped wing running on the ground and finding herself unable to follow the swarm attempts to re-enter the hive.

Hives should not be placed together on benches, as one hive cannot be examined or manipulated without disturbing all the other hives on the same bench, putting the bees on their guard and making them ready for an attack on the bee-keeper before he opens another hive. Benches also afford a convenient runway for ants, to the great annoyance of the bees as well as their owner. Hives should not be placed near willow hedges, cottonwood or any other trees which harbor ants, nor under evergreen-trees, which give shade when the bees ought to have the full benefit of the sun.

A high knoll exposed to severe wind; uneven ground, interspersed with gullies or boulders; low, damp ground, abounding in grass or weeds, which interfere with the free circulation of air around the hives, and which harbor toads and other enemies are to be avoided. Close sheds, boarded up on all sides but the front, will make it uncomfortably hot for the bees during summer, and may cause the combs to melt and break down.

Hives should not be placed in close proximity to dwelling houses, stables, line-fences or public highways, as the bees are liable to be disturbed and to become annoying, and often dangerous to people and animals; nor near haystacks, as the fire occasionally employed in the apiary may, through an accident, become the cause of a conflagration. Hives should never be placed close against a building or fence. There should be sufficient room so that the operator can stand at the rear of the hives when he is at work, and thereby avoid annoying the bees by being in their way while they are flying out and in at the entrance.

A clean, sandy plat, free from brush, weeds, bushes, evergreen-trees, boulders and other obstructions, is the best location for any apiary. The ground should have a gentle slope, and the hives face towards the east or southeast, that the morning sun may shine on the entrances, which will induce the bees to fly out earlier in the morning, than if the entrance is shaded. The entrance to all the hives should be in full view from the honey-house, that the owner may see at a glance from which hive a swarm is issuing, or where robbing is going on.

For the safety and convenience of the bees and queens, the hives should be as near the ground as possible, each hive resting on its separate stand, made of boards, or simply of four bricks or of blocks, sawed from the scantling. When a building is erected, there will often be a lot of ends and waste pieces of scantling, which can be sawed into such blocks instead of using them as kindling and fire-wood. Hives should not be placed directly on the ground, as it will rot the bottom-boards and harbor ants, but the earth may be banked up even with the entrance, so that spiders, toads and lizards cannot find a hiding-place underneath.

The hives may be placed in long rows, in hexagonal form or in any other position toward each other, which will make it most convenient for the operator, but should always be so far apart that a wheelbarrow can be run between them in any direction. If shade-trees are planted in the apiary, they should be so placed that they do not interfere with such free passage; they should be kept trimmed up, that the lower branches do not annoy the bee-keeper at his work, and should be thinned out, when necessary, that they do not give too dense a shade. All other trees or bushes, provided for the swarms to settle on, should be on the outer edge of the apiary.

A small, running stream, or a well near the apiary, is indispensable. It will be most convenient to have the apiary located at the rear of the honey-house. If the ground is sloping, and the house below the hives, it will facilitate the carrying of honey from the hives to the house. The space in front of the honey-house should be left unobstructed, so that a team may be driven up to the front door.

Independence, Calif.

For the American Bee Journal.

Space between Brood-Frames.

GEO. F. ROBBINS, (57—95).

I am the author of Query, No. 284, and when I sent it in I was anxious to know about it, so while waiting for the answers to the query, I was testing the matter myself, and long before the answers came, I had arrived at my own conclusion. However, I read the answers with as much interest as if I had not decided the matter myself, and I found in doing so that at least one well-known and successful apiarist—Dr. Miller—was not so well satisfied as I myself.

In two cases last spring where I could find combs thin enough I put nine of them in a 12-inch hive, and I did the same thing several times during the summer. I found the plan worked tolerably well, when combs not too thick, and that hung straight, could be found. When our frames are exact and true, if we put in only foundation starters, to have them thus close together is an excellent way to get combs built straight. Nothing is much worse than wide spaces for that. But when we come to manipulate frames so close together we find it difficult, injurious, and ofttimes impossible. There is not sufficient movable space even for very straight combs, and an apiarist of any experience well knows that in numbers of cases, for reasons impossible or inexpedient to help, combs will be built very uneven or to hang crooked in the frame. To be jamming such frames so close together is often very damaging; besides the thinner the comb when capped over the greater the cost of time and material to the bees.

On the other hand, nothing contributes more to make uneven combs than so liberal a space as 1½ inches. Moreover, so much space is not the best economy, for two reasons: First—It is a loss, because so much room is unnecessary. Second—The bees will build out and fill with honey so much more of the upper part of the frame. When the space is narrower they will fill the frames with brood almost or quite to the top-bar, and where we practice top-storing, as the most of us do, that is an important item. Hence I am satisfied that for general purposes 1⅓ inches is too narrow a space; 1½ inches is too wide. I have varied the spacing of frames considerably this season, and as the result of my experiments I have settled down to the conviction that, all things considered, 1⅜ inches from centre to centre is about right. In surplus arrangements worked for extracted honey I hardly want less than 1½ inches; wider will do about as well. Also, when we confine bees to five frames for wintering, I prefer to have them built a little thicker than 1⅜ inches.

Mechanicsburg,⊙ Ills.

Gravenhorst's Illustrated Bee Journal.

Autobiography of Baron Von Berlepsch.

C. J. H. GRAVENHORST.

August, Baron von Berlepsch, was born at Seebach, near Langensalza in Thuringia, June 28, 1815. Being a precocious boy he made up his mind while still a pupil of the Gymnasium (High School), to study ancient classic philology, but his father objected and compelled him to study jurisprudence. He became reconciled to the science of law at the Universities which he attended, in so far as to study *corpus juris* industriously, and with philosophical exactness. But his father further insisted on his practicing law in the hope of seeing his son some day become Minister of Justice. The dull routine of work, however, disgusted the young lawyer in a few years, in consequence of which he quitted the law and devoted his time to scientific studies in Munich until the death of his father, which occurred in 1841. From 1841 till 1858 he lived on the family estate of Seebach, occupying himself with bee-keeping, pomology, and his favorite study of classic philology. From 1858 to December, 1866, when he married at the advanced age of fifty-one, he resided at Gotha, and from that time he and his wife had a most happy home at Coburg.

I have the original of the above memoir before me, being in the handwriting of the Baron's well-known consort, Lady Lina von Berlepsch, who is also an authoress on apiculture. The Baron either dictated to his wife this biographical sketch or communicated it to her for the purpose of having it written down. The words interlined in the printed text are additions made by the Baron himself. This memoir dated from the year 1868, when I published an article in the *Gartenlaube* headed "The Leaders of German Bee-Keepers," with the likenesses of Dr. Dzierzon, Von Berlepsch, Kleine and Von Siebold, accompanied by biographical notes. Before compiling this article I applied for particulars to Von Berlepsch, with whom I was in active correspondence at that time.

Baron von Berlepsch took an interest in bees when still a child, and even kept a few colonies when at the University. On his taking possession of the estate of Seebach, it was his intention to give special attention to bee-keeping, for which purpose he established a large apiary there. He first used hives with immovable combs. When at that time Dr. Dzierzon invented hives with movable combs, he watched with the greatest concern this revolution in apiculture, and declared it to be a calamity which would do a great deal of injury to bee-keeping. However, he paid a visit to Dzierzon, and having convinced himself of the correctness of the method of the latter, he became a warm supporter of Dzierzon's theory, which had hitherto been strongly opposed by him; he, indeed, became the most zealous advocate of the hive with movable combs; and his letters on apiculture, which appeared in the *Eichstadt Bienenzeitung*, and which silenced Dzierzon's opponents, largely contributed to the success of the new system. That Von Berlepsch carried out a great many valuable investigations in regard to the economy of bees, and that he is the inventor of the frames, and of the so-called Berlepsch hive and the pavilions, are well-known facts.

In 1858 he parted with his Seebach estate and gave up bee-keeping, but he continued to take a deep interest in bees up to the time of his death. From Coburg he removed to Munich, where he died on Aug. 17, 1877.

Von Berlepsch is the author of a large work on bees, entitled, "Bees and bee-keeping in districts poor in mellifluous plants, considered from the present state of the theory and practice of apiculture;" the first edition of which appeared in 1860. This book is very beautifully written, and quite fascinated the readers at the time. Of course it is no longer in accordance with the requirements of the present time, still it contains much of lasting value and of deep interest to all thoughtful bee-keepers.

Braunchweig, Germany.

For the American Bee Journal.

Taxing Colonies of Bees.

W. J. ROBERTS.

A very self-satisfied correspondent in noting an article or two on the above subject, says: "Now the way is to find out if such property is taxable, and that can only be done by inquiring of the ablest and most learned in the law, and not those who have a mere surface knowledge of it." And then the next issue (June 28), as though the whole bee-keeping fraternity had asked him, as that ablest and learned man, the question, he informs the world that they are not taxable, without a special law to that effect. Saying that they are not taxable without a special law, is nothing more than saying they are not taxable unless they are taxed.

The Supreme Court of the United States, in Nathan *vs.* Louisiana, 8 How. 73, held that "the taxing power of a State is one of its attributes of sovereignty, and where there has been no compact with the Federal Government, nor cession of jurisdiction for the purposes specified in the constitution, *this power reaches all the property and business in the States.*" That power is exercised by legislation, designating the property to be taxed, and authorizing some agent of the State to levy and collect the tax. Until the power is exercised, it is as though the power did not exist.

It is silly to say there must be *special* legislation in the case of bees. All that is necessary is some legislation. In each State in the Union, all property therein is covered by the general leglislation on taxation. Such property as the legislature has decided shall be taxed is designated in one way or another. All other property is expressly or by necessary implication exempt.

All that any bee-keeper has to do to determine whether his bees are taxable property is to consult the *statute* law of his State. Accordingly as he shall find bees included or excluded in the enumeration of personal property to be taxed, will the question be determined. There is no occasion for consulting "the ablest and most learned in the law" of the bee-keepers of this country.

Keokuk,⌒ Iowa, July 29, 1886.

[We think that quite enough has been said on the subject of taxation, and we now ask our correspondents to desist, at least for the present. The one who asked the question which started this discussion ought to be quite satisfied by this time.—ED.]

For the American Bee Journal.

Honey-Dew on Wheat.

J. O. SHEARMAN, (100—135.)

One of my neighbors reported to me that my bees were working in swarms on his wheat, in the time of basswood flow, which was from July 6 to the 16th here, this year. Then after the wheat was cut the bees worked on the stubble. Do any of the fraternity know of a case similar? The bees would fly up in swarms ahead of him as he walked through the field (they did not offer to sting). The honey-dew was so thick all over the wheat while he was binding that it stuck to his hands and clothes like gum. No aphides or plant-lice were present, but the wheat was a poor crop, not well filled. Some patches a rod or two across would not have a handful of grain, although the straw was of good growth—the outcome of the drouth, as we had no rain worth mentioning for six weeks previously, and very warm days with a few cool nights at the time of the honey-dew. I did not hear of it until it was past, or would have gone to the spot to investigate it more particularly, but my neighbor is a responsible man, and I was busy at the end of that flow, basswood coming at the same time.

I did not find any honey of a spurious nature or bad taste in the combs from which we extracted a few days afterwards; it all tasted like basswood and clover mixed.

That was a mile or more east of us, and at the same date 1½ miles west, another neighbor reported that bees were at work for several mornings (from 7 to 9 o'clock mostly) on a walnut tree so plentifully that he thought there was a swarm alighting there, and going near by to see, noticed that the leaves of the tree looked "shiny and gummy," and the bees were on every leaf and twig. No plant-lice were noticeable. How is that?

White clover and alsike yielded well here, but shortened up a little by the drouth. Basswood was short and sweet, but not a very heavy flow. Goldenrod may yield some now that rain has come plentifully, for the first time in seven weeks.

New Richmond, ♀ Mich.

Read at the Indiana State Convention.

Winter Protection of Bees.

EVA SCHOLL.

There is perhaps nothing connected with the care of bees that has been the cause of so much anxiety, study and thought by bee-keepers as wintering; and, well it may, when official statistics show, that of 78,526 colonies in this State in the fall of 1882, 29,842, or more than one-third, were dead by April 1, 1883. Nor have we fared any worse than a number of other States, in proportion to the number of colonies kept. Such facts and figures show that with all our knowledge in other branches of business, successful wintering of bees is an art yet to be learned by many bee-keepers.

While there is uniformity in many things in the management of bees, when it comes to wintering, the plans and methods given are so many, and so various, as almost to distract the beginner. Uniform success will probably never be attained; nor is it possible for all to adopt the same plan. Let us then first consider what a colony needs protection against.

The food of the bee being liquid, nearly all is exhaled in the form of moisture. This passes off in moderate weather, but in cold it is condensed on the comb and sides of the hive in the form of frost. To prevent the accumulation of frost near the cluster, it is necessary to provide means for warmth as well as dryness. With the brood-nest contracted, and a good absorbent above the bees, we have, perhaps, the best known way to secure this; something that will retain the natural warmth of the cluster and allow the moisture to escape.

The principal points embodied in the plan of wintering here given, were suggested some twelve years ago by our esteemed friend, Mr. J. S. Hill, of Mt. Healthy, Ohio, and after ten years of uniform good success, I see no necessity of any essential change.

The hive I use is the 10-frame Langstroth, having double walls and bottom, with an open space between. This I consider of prime importance; not only as a winter hive, but also as a protection against heat in summer, as such hives need no shade, the air-space around the brood-chamber preventing all danger of comb melting down. The extra bottom with dead-air space is a safe-guard against moisture from the ground. The extra work required on such hives need not cost over 75 cents each, and does not add perceptibly to their size. As a 10-frame hive is too large for safe wintering, division-boards are used. These are made of two pieces of ¼-inch lumber, with air-space between. Division-boards do not reach the bottom of the hive by ½ inch. Eight frames give sufficient space for the strongest colonies. When chaff division-boards are used, there is room for only six or seven frames. Every brood comb has two half-inch tin tubes through it for winter passages. Five or six sticks, half-inch square, are placed across the frames, and a woolen blanket lined with muslin is then put on. The blanket should fit so closely all around that not a bee can get above it. A stretcher made of burlap tacked on a light frame, that drops loosely into the upper box, and rests on four short nails a half inch from the lower edge of the box, allows the box to be lifted off when filled with packing.

My experience is that dry beech leaves make the best packing. The box should not be more than ¾ full. Chaff is inclined to retain moisture. A little ventilation over the packing is necessary to allow the escape of moisture constantly arising from the bees. This is secured by slightly raising the cover. The entrance is tightly closed with a long block having a small notch about ¼ inch square, cut in the under side. Four inches above this entrance is an inch hole, so protected with a slide as to prevent a direct draft into the hive. Sleet and ice cannot close this upper entrance. Straw or refuse hay is packed under the hive at the first approach of cold weather; and a portable fence 4½ feet high is erected for a wind-break.

It is very important that all preparations for winter be made early, before the weather becomes too cool for bees to fly. Bees are very sensitive to the first cold, and it is very injurious to disturb them by any manipulations or feeding after they have entered dormancy, or their natural period of rest.

Lyons' Station, o+ Ind.

Boone and Hendricks Co. Convention.

The joint association of bee-keepers of Boone and Hendricks Counties, Ind., met at the residence of Mr. James Catterson, of Hendricks county on June 16, and was organized by electing Ora Knowlton, of Boone, President; Nathaniel Gossett, of Hendricks, and W. H. Higgins, of Boone county, Vice-Presidents; and John Lingerman, of Hendricks county, Secretary. After some preliminary business the association adjourned to dinner, which consisted of a bountiful supply of the good things that the ladies of this association know how to prepare, and the society is much indebted to the efforts of Mr. and Mrs. Catterson in making the meeting both useful and pleasant. The first business after dinner was to select the place for the next meeting, which will be held at Elie Smith's, Boone county, near Fayette, on the third Thursday of September next.

Mr. Catterson's bee-house was one of the attractions of the meeting.

The members took a lively part in the discussions, and Miss Martha Cox read a paper on "The Honey Bee." The President gave an address on the general features of bee-keeping. We had with us Mr. Mason, of Putnam county, who was full of information, and I. N. Cotton, of Marion county, President of the State Association, who gave us some of his stock of mirth and wit. The meeting was not only useful but lively, often indulging in applause. The social part of the meeting was more than pleasant.

JOHN LINGERMAN, *Sec.*
ORA KNOWLTON, *Pres.*

For the American Bee Journal.

My First Colony of Bees, etc.

W. M. BARNUM.

When I was a boy of 16 or 17 years, a friend offered me a colony of bees in an old-fashioned box-hive, if I would come and get them. Being glad of the chance, I accepted his offer, and told him that I would be after them the next morning. On the morrow, bright and early, taking one of the men with me, we started with the two-horse wagon. Arriving at Mr. W's we found nobody astir, so we went into the apiary of perhaps 15 to 20 colonies, and picking out the heaviest hive, we covered it with an old carpet and carried it to the wagon. The roads at that time of the year were in a terrible condition, so we drove over into Mr. W's meadow, which extended almost half way to our place, and arrived home all right.

Taking a large round fence-post we drove it into the ground (a few rods back of the house), and sawing it off about 2 feet above the ground, we securely nailed a board to it, which was perhaps 5 or 6 inches wider than the hive. Putting the hive upon this, I imagined that my "trials and tribulations were o'er;" but no, I soon found to my regret that they had but just begun. Rolling a log up within a few feet of the hive, I sat down to watch those "blessed bees." I had not been seated five minutes before I came to the conclusion that they were short of stores and needed a little help. I had arisen, and perhaps taken three or four steps towards the house, when a bee lit on my left ear. That bee died very suddenly, and if it had not been that that colony was a present, etc., there might have "sunthin" happened to "that." But I gave them some sugar syrup, and called up a lot of robber bees, and in my attempt to rescue the dish of syrup, I got stung again. Along towards night it commenced to snow, and the next morning the number of dead bees around that hive was astonishing.

I did not get over a pound of surplus honey that year, and only one swarm; two went to the woods. I often laugh as I think of those days.

and how proud I was of my first colony. But now, how changed! Since the advent of the movable-frame hives bee-keeping has taken a wonderful step forward, and is to-day one of the most promising industries mankind has yet discovered.

I think that any one of Mr. Doolittle's articles is worth many times the price of the BEE JOURNAL. I wish that he would give his plan of wintering bees.

I notice on page 474, Mr. M. L. Spencer's reference to my query concerning ants in the hives (Query, No. 279). He says: "Our common kerosene oil, the kind burned in lamps, will kill them, eggs and all." Yes, I do not doubt it at all, and I should think it would kill the bees too. I find Mr. G. W. Demaree's remedy quite effective, viz: wet salt. I tried it the day I received the paper, and to-day there is not an ant to be seen. I was surprised at Prof. Cook's answer, *i. e.*, "I find it easy to dislodge them by simply brushing them off." I had tried that several times before sending my query, but somehow they would always be there when I afterwards examined the hives.

Angelica, ♀ N. Y.

Read at the Maine Convention.

Label all your Honey.

LYMAN F. ABBOTT.

There are important points of consideration constantly arising in practical apiculture. The question of honey-production in Maine or New England, is no longer one of doubt, and that to a profitable degree. As the business has become better understood, and bee-keepers have been willing to devote the study, time and care that this somewhat peculiar business demands, to make it a success, honey-production has been fairly remunerative. The highest success in any branch of industry as measured by the present standard, is only attained by the application of strictly business principles and thorough knowledge of all the facts and relations bearing upon that particular branch of productive industry.

In the matter of honey-production the Maine bee-keepers, as well, in fact, as the producers of honey in any part of the country, have some adverse influences to contend with. Before the management of bees and the adaptation of implements suited to the best manner of manipulating the hive and the production of honey were so well known as now, what honey was produced found ready sales at good prices, and the supply was never half adequate to the demand. Those days, however, have passed. In common with all branches of industry, apiculture has made wonderful strides in the way of improvements in all features connected with the business.

While good progress has been made in the matter of producing the products of the hive, there have been influences at work, modifying to some extent the relation of production of hive products to the market. We have fallen upon an age of adulteration. It is surprising and alarming to contemplate the extent the adulteration of foods has assumed. Not only that, but in the case of honey the most absurd statements have been invented, and these circulated from one end of the country to the other. This has created a prejudice and mistrust in the minds of the reading public regarding the purity and genuineness even of comb honey.

We have reasons for saying that Maine honey, like most of her productions, excels in the market. The only trouble is that we do not produce enough of it. It is safe to say that the past season where we produced one ton of honey, two tons could as well have been harvested, had the requisite number of colonies of bees been on hand to gather it.

This matter of selling pure honey will soon stand on a firm foundation, if bee-keepers take the right course. The time is not far away when the man who will not label his goods so as to equivocally declare their honest contents, will beg for a market.

Honey, like butter, must be sold on its merits. We are educating the public up to nice distinctions in the matter of domestic articles. It is but a few years, comparatively, since one man's butter discriminated in the matter of price over another's dairy. The same was true with honey, and largely that is the case now. But the educated bee-keeper knows, and a discriminating public is beginning to find it out, that all honey is not the same in taste, color, texture and purity. It is safe to say each apiary in Maine may, as a general rule, make at least three qualities of extracted honey during the season.

As I have intimated, bee-keepers should put their names upon every package of honey sent to the retailer, in a plain, conspicuous manner, so as to carry conviction that the contents of the package are just what it promises to be—a pure product of the bee-hive. In this way prejudice will be overcome, and faith in the honest bee-keeper be established.

Lewiston, ♀ Maine.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Local Convention Directory.

1886. *Time and place of Meeting.*

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept 4.—Sheboygan Co. at Sheboygan Falls, Wis.
Mattie B. Thomas Sec., Sheboygan Falls, Wis.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Milhome, Wis.

Oct. 12-14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Bee-Killers.—Wm. H. Smith, Centreville, ○+ Ind., writes:

I send some insects that kill bees by the hundreds when they gather honey from my sweet clover. I have not seen them any place else. They catch them and suck the honey out of the bees. What are they?

[These insects are *Asilus Missouriensis*, commonly called bee-killers. They are very destructive enemies of the bees, quick on the wing, and not easily captured. We have a collection of over 100 different kinds of these bee-killers in our Museum.—ED.]

No Swarms and No Honey.—M. W. Shepherd, Rochester, ♂ O., on July 29, 1886, says:

I can record a total failure in bee-keeping here this season. We have had no swarms and have obtained no honey. Basswood and white clover never looked more prosperous, but failed to secrete nectar. Some colonies have not as much honey in the hives as they had the last of May. Nuclei have to be fed to keep them from starving.

Cause of Paralyzed Bees.—F. J. McConoughey, Hilliard, ♀ Mich., on July 30, 1886, writes:

Seeing in the BEE JOURNAL of July 14 a query in regard to paralyzed bees, I thought that perhaps I might throw a little light on the subject. The description of those bees' actions exactly tallies with the actions of bees posioned by working on *Digitalis*—the "foxglove" of our flower-gardens. Some years ago I saw some beautiful specimens of foxglove a few miles away from here, and of course must have some in my flower-garden. We got them, and in due time they blossomed, but they never got the chance to do so again, in our yard. The bees do not always get home to die, some of them dying before they can get out of the flower. If there is *Digitalis* growing in flower-gardens in the neighborhood of the querist, I dare say that he will find, if he watches, that his bees have visited them.

One of the Goldenrods.—Fred F. Rockwell, Leonard♂ Texas, on July 29, 1886, writes:

I enclose a small sprig of a flower that bees are fairly "booming" on just now. It is very thick on a large grass farm near us. Will you kindly give me the name of it?

[It is one of the many goldenrods (*Solidago*), exquisite in appearance, and excellent for honey.—Ed.]

Season in Southern New York.—J. H. Andre, Lockwood,♀ N. Y., on July 30, 1886, says:

The honey harvest this season began the earliest in Southern New York of any year since 1865, and continued good until July 1, when the extreme hot weather shut off all resources by which the bees could obtain honey; since that time they have barely made a living. In fact, one colony which I had made by division, and given the old queen with but little honey and two frames of brood, I fed for fear they could not gather enough to take care of the brood. I suppose some are looking forward for a good yield of surplus from buckwheat, etc. Now I hope they will not be disappointed, but I sum it up in this way all through this poor honey yield: The colonies, with the exception of a few of the strongest, are weak, containing only about half as many bees as they should at this season of the year, and if we get a few weeks of good honey weather, which I think we will, as everything is favorable now, the first thing the bees will do will be to build up in numbers, and that will take nearly all of the honey gathered. Add to this an early frost (and we are almost certain of one this season, as when the chestnuts blossom late we always get an early frost), and the outlook is not favorable. I do not doubt but what many June swarms will not gather enough for winter stores, especially if hived without foundation. I have already begun to build up the few weak colonies I have, as I think it is far better to do it now and know it is well done, than wait until late in the fall and do it then.

Teasel Honey.—C. A. Camp, Painesville,♂ O., writes:

In regard to Mr. Doolittle and teasel honey, I would say that it is not proposed to give it up in this manner. Now I assert that not one apiarist in one hundred knows that Mr. D. has "from 4 to 6 weeks" of honey-flow from teasel. When he makes the statement of 135 pounds of comb honey per colony, as he does in his circular, without stating that it came in part from teasel, it is certainly misleading. It must be remembered that Mr. D's articles are sometimes copied into agricultural papers, and are read by those who are not apiarists, and when such yields of honey are stated without mentioning the source, it induces many to embark in the business, and only half-yields of honey can be the result. The whole truth should be told. On page 458 the editor stated that in 1877 the "Thurber Gold Medal" was awarded to Mr. D. on teasel honey, and the bee-papers made the fact known "at the time" Why, Mr. Editor, do you not know that within nine years thousands of apiarists have been made, and many, very many, have been born since 1877? and I fail to see how it could have remained anything except a profound "secret" to all these people, and I shall do the best possible to let the cat out.

[This "secret" business and "letting the cat out" is perfect nonsense. Those who were made apiarists or born since 1877 are *not* the complainants now. We have requested Mr. Doolittle to tell all he knows about Teasel as a honey-producer, and his article will be published next week.—Ed.]

Shipping Bees.—A. Carder, Varna, ⊙ N. Y., asks the following:

1. What kind of a car is the best to ship bees in, a grain or a stock car? I want to ship about Sept. 10. 2. Will wire-cloth over the top of the hives give bees enough ventilation when shipping them?

1. A grain car is best; an open car would admit too much soot and dust. Pack them so that the frames are parallel with the track.

2. Remove the cover, and put three strips across the frames over the wire-cloth for ventilation. If the hives have porticos, nail wire-cloth over them, leaving the entrance from the frames to the portico open.—Ed.]

Severe Drouth.—D. J. Myers, Republic,♂ O., on July 26, 1886, writes:

We had a splendid season for bees in this locality until July 10, but the continual drouth throughout July scorched all the white clover. We have had three heavy honey harvests, fruit-bloom, white clover and basswood. These are our honey-producing flowers. Bees are now beginning to work on corn-tassel blossoms and pumpkin blossoms. I put out on the summer stands 21 colonies; increased to 36, sold 6, and have 30 left. I expect 1,000 pounds of comb honey. I took off from one hive June 29, 80 pounds, and expect 40 more. Extracted honey is of very slow sale in our market. Comb honey is selling from 10 to 13 cents per pound. We do not expect much fall honey, as we had no rain for six weeks to do any good.

Bee-Bunglers. — C. W. Dayton, Bradford,♂ Iowa, on Aug. 2, 1886, writes:

I might say, as the general report goes, that everything is drying up, so there is no prospects for a fall crop. Fire will run through the grass in the pastures. We have had the greatest drouth ever known here. I think the bees get a little honey-dew, which may be beneficial, by cleaning out some of the "one-horse bee-bunglers" who rush their honey into the market early, all at once, and at any price, much to the disgust of the skilled and posted apiarist.

Honey Crop Almost a Failure.—H. R. Boardman, East Townsend,♂ O., on Aug. 2, 1886, writes:

This has been the poorest season for honey in this locality ever known. The season opened unusually promising, but a severe drought and cool nights ruined the surplus yield. The brood-chambers are unusually heavy. In several of my apiaries surplus is a total failure. I have hundreds of colonies that have not gathered a pound of surplus honey, or had any increase. I am very sure that the early reports have given a false estimate of the honey crop in the country. I think it will be found to be very poor, and in many places a total failure. A little honey-dew has made its appearance in some places, but not sufficient as yet to do any harm.

An Absconding Swarm.—Lawrence Beleal, Cassadaga,♀ N. Y., writes:

On June 16 a swarm issued while I was away, and left for parts unknown; but strange to say on the next day they came back and settled on a hive that had a colony in it. I looked them over, and found they were queenless. The colony they issued from did not swarm again.

Fall Honey Bloom a Failure.—J. N. Arnold, Richmond,○↘ Iowa, on Aug. 2, 1886, writes:

Bees wintered very successfully in this locality last winter. I had 25 colonies on the summer stands in the Quinby hive; they increased to 50 colonies, and got 4,000 pounds of extracted honey from white clover and linden. I do not think there will be much fall honey; it is very dry. We have not had a good rain for ten weeks.

Are Bees Animals?—J. O. Shearman, New Richmond,♀ Mich., on July 26, 1886, writes:

Mine are taxed in this way: I report to the supervisor so many second-hand hives worth, say $1 each on an average, with one bee in each over six months old worth from 50 cents up to $3 (but few $3 ones); average, say $1.50. Last spring he put them all at $2 each, as all property of that kind was low. I do not want to shirk responsibility as a tax payer, and my principal business is in the bee-line. The Michigan law states expressly that no animal less than six months old shall be taxed, or rather all *over* six months *shall*, and all my bees but the queen are less than six months old. Are bees animals? Well, they are not vegetable or mineral. Are chickens animals? And are they taxable?

Drouth Broken.—C. P. Dow, Covington,♂ Neb., on Aug. 2, 1886, writes:

I have about 180 colonies of bees. We have no white clover here, and so depend wholly on wild forage for our honey, such as willow, box-elder, sweet-elder, sumac, goldenrod, etc.; the latter is our main dependence, as it yields bountifully, if not nipped by frost. Our drouth of over 45 days is at last broken by frequent showers, and I expect to see an abundant yield from goldenrod, although my bees have done remarkably well so far. I have taken off a good quantity of as fine a quality of honey as can be found in Sioux City, white clover not excepted.

Peculiar Season.—Wilber G. Fish, Ithaca,⊙ N. Y., on Aug. 2, 1886, writes:

The season here has been a peculiar one. White clover bloomed very profusely, but the drouth was so severe that no honey was secreted, and apiaries depending solely upon that for early honey, have no surplus. Alsike yielded sparingly; I have extracted an average of 25 pounds per colony from it, and bees are now working upon its second bloom. Basswood is an entire failure. The late rains have brought on buckwheat, and the indications are favorable for a good yield from it.

Not Much Basswood Honey, etc.—S. S. Sleeper, Holland,⊶N. Y., writes;

The honey crop in this county is light. There is no basswood honey compared with what we generally have; only about one-third of a crop. The AMERICAN BEE JOURNAL is a welcome messenger every week. I could not think of keeping bees without it. What an inestimable benefit it has been to the bee-keepers of America. It has placed apiculture in in this country on a firm basis, so that it can be relied upon as a pursuit.

Unwise Bee-Keepers.—A. W. Fisk, Bushnell,⊶ Ills., on Aug. 2, 1886, writes:

Bees in this locality that were properly managed did remarkably well the forepart of the season, and honey was abundant. Some bee-keepers sold their honey too soon and flooded our Bushnell market—some selling as low as 5 cents per pound for extracted, and 10 cents a pound for nice comb honey. I think this is doing themselves a wrong, and damaging to the bee-business. But it has been very dry for the last four or five weeks, and bees are doing nothing, and the price of honey is advancing, for there is no show for a fall honey crop unless we have heavy rains immediately.

The Chapman Honey-Plant.—T. F. Bingham, Abronia,♀ Mich., on Aug. 2, 1886, says:

I send you a half-open head of the Chapman honey-plant. It is a wonderful attraction to the bees. My plants have one or more bees on every open head from morn till dark. Their hum is constant among my fifty plants. I have never seen a plant half so frequented before.

Hunting Bees in the Woods.—F. H. Webster, Lynn,♂ Mass., on Aug. 2, 1886, writes to us asking for information concerning the capture of bees in the woods. Several others have asked for similar information, and as we have had no experience in that line, we will let Mr. F. M. Johnson, an experienced bee-hunter, give his methods as follows:

You require a small box, which can be made of any kind of wood. The box is of a slanting shape, and should be made according to the following dimensions: Bottom, 4x6 inches; sides, 4 inches at one end, beveled down to 1½ inches at the other; end pieces, one, 4x4 inches, the other 1¼ deep by 4 inches long. The top should be a separate piece, and made as follows: Width, 4 inches, whole length 12 inches; cutting down 4 inches on end for handle, and inserting a glass 3x1 inches, flush with the under side at the other end, as near the end as convenient.

The box should contain a piece of honey comb about 1¼ inches in thickness, which should be scented with bee-bait (the directions for making this are given below), covering the bottom of the box. Taking the box in the left hand, and the cover in the right, and approaching the bee while at work on the flower or shrub, you insert the box under the bee, and quickly putting the cover on the top (in such a manner that the light can shine in), you have the bee secure in the box; then put the box on a stake 3 or 4 feet high, taking care not to jar the box more than necessary. Then shove the cover down so as to shut out the light from the glass, when the bee will go to work on the honey, which can be ascertained by holding the ear to the box, as it will cease its "humming" as soon as it commences on the comb. Then the cover can be taken off and the bee will remain on the honey. Then take a position where you can have an unobstructed view of the box and its surroundings, and wait for the bee to come out, which it will do in from one to three minutes, and commence circling in the air, gradually enlarging the circles until it finds its latitude, at which it will immediately start in a direct line for its home, and here care must be taken to accurately mark the direction it goes. You must now wait for a short time, when the bee will return and re-enter the box, which it will repeat as long as the box remains. If the tree should be near by, the other bees will accompany it on its second or third return; if at a great distance it will take a longer period for the bees to "double up."

If you have gotten 15 or 20 bees at work on the line you can safely take the box to a point as far distant, in the course the bee has taken, as you choose, being careful not to pass where the bee is likely to tree, as they will not follow the other way. Now, open the box again, and if you are on the line the bees will find it in a very few minutes. If they do not you will know that you are off the line, or have passed the tree, and should move your box to a point that you know is on the line. This is to be repeated until you run the bee to its tree.

If you have but a few bees it will be necessary to shut them in the box and move them in this manner from 30 to 60 rods at a time, then open your box and wait for them to go and return. This is to be repeated until you have found the tree.

Cross lining is important. If anything should prevent you from following the bee in a direct line from where you first start it, you can move the box a distance to the right or left and start it again, by which means you can centre the bee on some prominent object, whereby you can invariably locate the tree within a radius of 5 or 6 rods.

Half an ounce of tincture of annis mixed with a half dozen drops of oil of organum, to be kept in an air-tight bottle.

Instead of using honey in your box, put a quantity of granulated sugar in a bottle and dissolve it with cold water until it becomes a thick syrup, and fill the comb in the box with this liquid, which is better than the real honey.

[A pair of climbers is quite necessary when climbing trees, and a rope tied around the waist with which to draw up the desired tools. The limb or tree should be cut off above the hollow containing the bees, and allowed to fall. Then tie a stout rope about the log hive, pass it over a limb above, cut the hive off and lower it to the ground. Let it there remain an hour or so, or until sun-down, when the bees will have found and entered the hive again. Then cover the entrance with wire cloth, take it away, and then transfer the bees in the usual way to a frame hive.—ED.]

Convention Notices.

☞ The Cortland Union Bee-Keepers' Association will hold a basket picnic at Little York, N. Y., on Wednesday, Aug. 18, 1886. All interested in bee-culture, with their families, are cordially invited to attend and have a good time.

D. T. SHATTUCK, *Sec.*, Homer, N. Y.

☞ The next meeting of the Stark County Bee-Keepers' Society will be held in Grange Hall, at Canton, O., on Aug. 31, 1886. M. THOMSON, *Sec.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

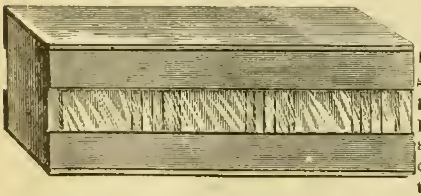
ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

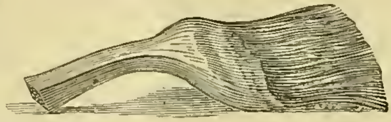


Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at $6.00 each.

Red Labels for one-pound pails of honey, size 3x4½ inches. — We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Italian Queens.—We have a few untested queens which we can send by return mail. Three for $2.75; six for $5.00; twelve for $9.00. For Tested, double the prices.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable.



When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result —a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so *cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

To any One sending us *one new* subscriber with their own renewal (with $2.00), we will present a copy of the new "Convention History of America."

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. 1, bound in cloth, $2.50, postpaid.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 7 a. m., Aug. 9, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Prices are nominal. Offers of 12@13c. would be accepted; yet 14c. is being asked.

BEESWAX.—Scarce at 25c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The present quotations are as follows: Fancy white comb in 1-lb. sections, 10@12c.; fancy white comb in 2-lb. sections, 8@10c; buckwheat in 1 and 2-lb. sections, 5@8c; extracted white clover, 6c; extracted, California, 4½@5c; extracted, Southern, per gallon, 45 to 55c.

BEESWAX.—23 to 28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—The market is a little dull, fruit interfereing with the demand. Best comb honey in 1-lb. sections, 13c.

BEESWAX.—Firm at 23c. for fair quality.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—The demand for extracted honey has been very light of late, but it seems to be improving gradually for manufacturing purposes. There is considerable honey in the hands of commission merchants, and prices are very low—3½ to 7 cts. per pound is the range of prices. Prices of comb honey are nominal.

BEESWAX.—Arrivals are good and the demand fair. We pay 18@22c. for fair to choice yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Within the last two weeks honey has not sold so readily, owing to the near approach of the new crop and the uncertainty of the new prices. Best white, 1-lb., old honey moves slowly at 14 cts.; no demand for 2-lbs. Extracted, 6@7c.

BEESWAX.—22 to 25c

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The receipts of new comb honey are fair, with a good demand, and light stock in the city. Extracted is in light demand. We quote: ½-lb. sections, 16c.; white clover, 1-lb. 13@14c.; dark, 1-lb., 10@12c.; white clover, 2-lbs., 11@12c.; dark, 2-lbs., 9@10c.; white sage California, 2-lbs., 10@11c.; dark, 2-lbs., 8@9c.; extracted white clover, 5@6c.; dark, 3@4c.; white sage California, 4@5c.; dark, 3½@4c.

BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is fairly supplied with honey, trade is dull, prices depressed, and the outlook is for a large production. Already some is being peddled about the city by the producers themselves, demoralizing the prices, which should not be done. We quote: Choice white in 1-pound sections, 14@15c.; 2-lbs. 13@15c. Dark honey not wanted. Extracted, white, in barrels and kegs, 5@7c.; in tin cans, 6@8c.; dark in barrels or kegs, 4@6.

BEESWAX.—25c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—Arrivals of honey have been smaller in the last week, as the prices are so low that producers or owners cannot afford to sell without a loss to them, and they prefer, therefore, to store their honey either here or in the country for better prices. The crop has been represented much larger than it really is; and prices are improving a little, or are at least a little firmer. Some large sales at 3¾ to 4c. for choicest quality for export have been made. We quote 3½ to 4¼—the latter for choicest quality in a jobbing way. Supplies are very small, but soon they may increase, and quality promises to be choice.

BEESWAX.—According to quality, 20@23c.

SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Prices are so low that honey-producers are holding back their product; still the market is well supplied. We quote: Comb, extra white, 8½@10c.; off grades, 6½@7½c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.; dark, 3c.

BEESWAX.—22½@23c.

O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½c.; in cans 6@7c.

BEESWAX.—Firm at 22c for prime.

D. G. TUTT & CO., Commercial St.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it the prices are reduced, as follows :

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

☞ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.
E. T. ABBOTT, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

Advertisements.

WILL sell 400 full Colonies of Bees in lots to suit buyer ; or will sell Apiaries already stocked up. **Now is your time.**
Address, **H. R. BOARDMAN,**
28Atf EA. TOWNSEND, Huron Co., O.

Metal Reversible Frame Corners.

ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.

Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. **F. M. JOHNSON,**
WASHINGTON DEPOT, Litchfield Co., CONN.
32Atf

ATTENTION, BEE-KEEPERS ! !

NOW is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates : 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
32Atf COLERAINE, MASS.

HONEY and BEES for SALE.

5,000 **POUNDS OF HONEY,** White Clover and Basswood, in 1-pound Sections. Also, **100 COLONIES of Bees** in good hives ; good straight combs, strong with bees and heavy with honey—at **$6.00** per Colony. **WILLIAM BLAKE,**
32A3t BUCHANAN, Berrien Co., MICH.

WANTED!

500,000 Names.

EVERY Poultry, Bee or Pet Stock Breeder subscribing for "THE POULTER" during the next 90 days—and sending us a list of not less than twenty-five (25) *bona fide* names and addresses of persons who are or may be interested in POULTRY (so that we may send them Sample Copies)—will have his or her name inserted in our "Breeder's Directory," FREE OF CHARGE.

To the Breeder sending the largest list of names will be presented a *one inch advertisement* in "THE POULTER," for Six Months ; to the second largest list, for Four Months ; to the third largest list, for Two Months ; and to the fourth largest list, for One Month, *free of charge.*

This gives *every* breeder (who subscribes) a *Free "ad" in our Breeder's Column.* "THE POULTER" one year *and a chance for a one inch "ad" free*—**ALL FOR 50 CENTS.**
Address, **THE POULTER,**
32A3t MT. VERNON, OHIO.

White Poplar Sections

We make the finest Honey-Sections in the World and make no exceptions. G. M. Doolittle says : "The last sections are just complete." James Heddon—"They excel *everything* in the line of perfect workmanship." Prof. N. W. McLain—"The sections excel anything I have seen heretofore." J. B. Mason—"Have received samples from all manufacturers who advertise in the bee-papers. I must say this is by far the nicest section I have ever seen." Jno. L. Janeway—"They seem perfection itself so far as human workmanship can go." Sample for 2-cent stamp. Price-List of Sections, Hives, Syrio-Albino Queens and Bees, and other Apiarian Supplies, free.
Address, **DR. G. L. TINKER,**
27D4t NEW PHILADELPHIA, OHIO

I CAN use a few thousand pounds of Extracted Honey of good quality, if cheap. Address,
H. R. BOARDMAN,
28Atf EA. TOWNSEND, Huron co., O.

BEE Hives and Sections—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

TESTED Queens, (Imported Mother), $1.25 each ; $12 per doz.—O. N. Baldwin, Clarksville, Mo.
4A1y

ROOT'S Simplicity and CHAFF HIVES, Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand, Shipping-Crates, all sizes, single and double tier. **E. R. NEWCOMB,**
PLEASANT VALLEY, Dutchess Co., N. Y.
27A8t

FINE Tested Italian Queens of this year's breeding, for $1 each ; Untested Queens only 65 cts. each, by return mail. Hives and Sections at rock-bottom prices.
B. J. MILLER & CO., Nappanee, Ind.
29Atf

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

ITALIAN QUEENS, by Return Mail, Tested, 1.00. Untested, 75 cents.
26Atf **GEO. STUCKMAN, Nappanee, Ind.**

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

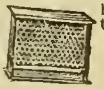
The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

Golden Italians.

WARRANTED Queens 75 cts. each ; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,
JAMES WOOD, North Prescott, Mass.
20A20t

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.
THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

THE AMERICAN APICULTURIST

SENT one year, and a **Tested Italian Queen,** to each subscriber—all for $1.50. Sample copies free. Address,
30Atf **HENRY ALLEY, Wenham, Mass.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

TWO HUNDRED

Select Tested Italian Queens!

Large, Handsome and Extra-Prolific Queens

$1.50 Each, or Three for $4.00,

By return mail. Safe arrival guaranteed. Make Money Orders or Postal Notes payable at Salem, Mass. Address, **HENRY ALLEY,**
29Atf WENHAM, MASS.

HUMPHREYS'

HOMEOPATHIC

SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.
A. J. COOK, Author and Publisher,
1A1y Agricultural College, Mich.

Italian and Carniolan Queens

BY RETURN MAIL.

BRED in separate apiaries away from other bees. Warranted Italian or untested Carniolan Queens, in June, $1.10 ; 6, $5.90 ; in July, $1 ; 6, $5. State which you prefer, **Bellinzona** or **Golden Italians.** For full particulars and prices of Bees, send for Circular. *Satisfaction guaranteed.*
CHAS. D. DUVALL,
24Etf SPENCERVILLE, Mont. Co., MD.

ITALIAN QUEENS.

I WILL furnish **Warranted Italian Queen-Bees** for $1.00 each ; Tested Queens for $2.00 each. Delivered by mail.
PETER BRICKEY, Lawrenceburg, Ky.
18E10t

W. Z. HUTCHINSON,

Is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows : Single Queen, $1.00 ; 6 Queens for $5.00 ; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound), Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.
W. Z. HUTCHINSON,
8Etf ROGERSVILLE, Genesee Co., MICH.

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece, V-Groove, $4 per 1,000 Less for lots of 10,000

40c per lb. for heavy.
50c " " light.
Send for Samples and Price-List.

A. F. STAUFFER & CO.,
15Etf STERLING, ILLS.

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

CONDENSED PRICE-LIST OF

BEE-KEEPERS' SUPPLIES

FOR SALE BY

Thos. G. Newman & Son,

923 & 925 West Madison Street,
CHICAGO, ILLS.

—o‡o—

Our Illustrated Catalogue (36 pages) sent *free*, upon application.

—o‡o—

HEDDON'S NEW HIVES.

SAMPLE HIVE **$4.00.** This includes the bottom-board and the stand; a slatted honey-board, and a cover; two 6-inch brood-chambers, each containing 8 frames; 2 surplus arrangements, each containing 28 1-lb. sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is nailed and painted, ready for immediate use.

For Hives Ready to Nail, see our Catalogue.

LANGSTROTH HIVES.

BROOD chamber with portico and 7⅜ in. cap, 10 frames, nailed, not painted $1.25. Material, in the flat, 90c. each. With movable side, $1.75; in flat, $1.30.

We also make our 7⅜-inch caps with a sloping or cottage roof—price 15 cts. nailed and 10 cents flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

LANGSTROTH FRAMES.

MATERIAL (9⅛ x 17⅝ in., outside) per 100, $1.25. Per 1000, $12.

SUPERS for Comb Honey.

STORY (32 1-℔. sections) nailed, 75c. Material, in the flat, 50c.

Story (24 2-℔.) same price as above.

Story (7 wide-frames, with 21 2-℔. sections and separators) nailed, 75c. Material, in the flat, 60c.

Story (7 wide frames, with 56 1-℔. sections and separators) nailed, $1.50. Material, in the flat, $1.05.

Comb-Honey Rack (18 2-℔. sections, separators and glass) nailed $1, flat 50c. Rack without sections, &c. 35c. flat 15c. Rack material, in the flat, by mail, 75c.

HIVE CLAMPS.

FOR securing loose bottom-boards, VanDeusen's, sample set, by mail 15c One or more, by express, 10c. each.

Ackerman's—Sample set, by mail 20c. One or more, by express, 15c. each.

SECTIONS for Comb Honey.

ONE-PIECE (Forncrook).—Of these we keep in stock the 4¼x4¼ in. size holding 1℔. and 5¼x6¼ inches, holding 2℔., a trifle *less* than 2-inches wide, with narrow or wide tops; also, both sizes 1⅞ inches wide, with narrow tops.

	4¼x4¼	5¼x6¼
1,000 Sections	$4.00	$4.50
500 "	2.25	2.50
250 "	1.25	1.50
100 "	60	70

Odd sizes, 5x6 or less, (not less than 500 made) $3 for 500; $5.50 per 1,000.

DOVETAILED, four-pieces, 5¼x6¼, wide or narrow tops, and 4¼x4¼ with narrow tops only, (all *scant* 2 in. wide). Prices same as the above

PRIZE—to be nailed—are of 2-lb. size only. Prices same as the above.

HONEY CARRIAGE,

REVOLVING Comb Hanger, Tool Box and Recording Desk. combined. Price, complete, $18.00.

BARNES' SAWS.

A COMPLETE illustrated catalogue and price-list of these machines will be mailed free, upon application.

ATOMIZER.

TO change the scent of bees when introducing Queens, uniting or dividing colonies, making nuclei, etc. Price, 75c. Mailed for 10c. extra.

SWARM CATCHER.

BAILEY'S swarm catcher consists of a frame-work, made of wood and covered with wire-cloth, which can be set at any angle. By its use, with a queen cage, a swarm can be compelled to stay in any hive, until the swarming-fever is over. Price $3.80.

COMB FOUNDATION.

WE keep three sizes in stock, viz: 12x18, 8x16½, and 10x11 inches. Special sizes, in a week, at same prices, which may be changed without notice.

1 lb., by mail, (small sheets)	65c.
10 " or less, by express, ⅌ lb.,	40c.
25 " " " "	39c.
50 " " " "	38c.
100 " " " "	37c.

Thin, *for comb honey,* **10c.** ⅌ ℔. *extra.*

Extra Thin, (VanDeusen's *flat-bottomed* or Vandervort's) **20c.** ⅌ ℔. *extra.*

Wired, (8x16½ or 10x11 in.) 1 to 25 pounds 60c. ⅌ ℔.; 25 to 100 lbs. 58c. ⅌ ℔.

COMB FOUNDATION MILLS.

WE can furnish any of the Comb Foundation Machines, or the Given press, at manufacturers' prices.

FOUNDATION CUTTER.

Small size (tin wheel)	10c
Large size (steel wheel)	75c

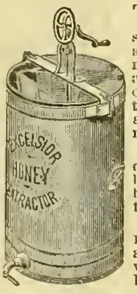
When wanted by mail, add 2 cents to the former, and 5c. to the latter price.

SHIPPING CRATES.

MATERIAL for 50 crates (to hold 12 2-℔. sections) no glass, $4.75. A sample nailed, with sections, 50c.

Material for 50 crates (to hold 24 1℔. sections) no glass, $6.00. Sample, 60c.

HONEY EXTRACTORS.



THE **$8** and **$10** sizes are made to suit those who desire a cheap but practical machine. The cans are smaller, the sides of the baskets are stationary, and they have no covers, strainers, or metal standards.

Being made entirely of metal, they are very light and durable, and have lugs for firmly fastening to the floor.

Those who want the BEST honey extractor are referred to those who are now using the Excelsior.

For 2 frames,	13x13	inches	$ 8 00
For 2 "	10x18	"	8 00
For 3 "	10x18	"	10 00
For 4 "	10x18	"	14 00
For 2 "	13x20	"	12 00
For 3 "	13x20	"	12 00
For 4 "	13x20	"	16 00

The 3-frame basket is in a can of the same size and style as the 2-frame. The 4-frame basket is in the larger can; the latter 4 have metal standards for the basket to revolve upon, leaving room underneath the basket for 50 or 80 pounds of honey.

EXCELSIOR Wax Extractor.

WE make two sizes, the smaller one having a larger capacity than the Swiss Wax Extractor. Prices, small size, **$4**; large size, **$5.00**. Some of the advantages of this Extractor are:

1. It is more easily operated, there being no necessity for removing the top to re-fill with water.
2. It melts the wax quicker, because it is brought into a more direct contact with the steam.
3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.
4. The filler for water acts also as an indicator, showing the amount of water in the boiler; when the steam escapes through the filler, more water is required. Keep a kettle of hot water ready to re-fill when required.

PURE PHENOL.

FOR the cure of **Foul Brood,** used by Mr. Cheshire, of London, England. As it is a liquid, it can be sent only by express. Price, 25c. per oz.

TIN POINTS, for Glassing Sections

SQUARE or **V**-shaped, 1,000, by mail, 50c. By express or freight, 40c.

SHUCK'S BEE-FEEDER.

FOR feeding bees at the entrance of the hive, any time; it feeds much or little, as may be desired; feed can be reached only by the bees from the inside of the hive. Price, by mail, 30c. By express, 25c. each, or $2.40 per doz.

PERFORATED-ZINC.

DRONE and Queen Excluders.—We carry in stock two sizes: 19¾x14½ inches, for Langstroth hives—price 25 cents each; also in sheets 3x8 feet—24 sq. ft.—price, $2.75 per sheet. We will cut pieces at 15 cents per sq. ft.

HONEY KEGS.

THESE Kegs are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap, and often cheaper. They need no waxing, but should be well scalded with boiling water before used. Do not soak them. Prices:

5 gallon, to hold	50 lbs.	40c
10 " "	100 lbs.	60c
17 " "	175 lbs.	80c

A discount of 10 per cent. on 25, or more; 12½ per cent. on 50, or more; and 15 per cent. on 100, or more, kegs.

LABELS FOR PAILS.

THESE labels are of two sizes, printed on colored paper; they are very attractive, and add greatly to the appearance of the pail when filled and offered for sale. Either size, printed with name and address, at the following prices—(not less than 100 printed):

	Small.	Large.
100	$1 00	$1 00
250	2 00	2 25
500	3 00	3 50
1,000	4 00	5 00

TIN PAILS FOR HONEY.

THE Straight Pails of all sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Samples of the 4 sizes, put inside of one another as a nest, price, 50 cts. by express. Prices:

		Per doz.	Per 100
Gallon, holding	10 lbs.	$1 80	$12 00
½ Gallon, "	5 "	1 50	9 00
Quart, "	2½ "	1 20	7 00
Pint, "	1¼ "	65	4 00

THE Tapering Pails of all sizes have a bail, and on the 25-pound pail a wooden handle is added. These tapering pails are made heavier and stronger than those with the straight sides—the covers are deeper and the top edge of the pail is doubled over, making it smooth and convenient to handle.

Samples of the five sizes, nested, 75 cents, by express, or the four smaller sizes, 50 cts. Prices:

To hold	1℔.	4 lbs.	7 lbs.	13 lbs.	25 lbs
Per doz.	.75	$1,25	$1.50	$2.00	$3.25
Per 100,	5.00	8 00	10 00	14 50	23 00

GLASS HONEY JARS.

THESE Jars, at the following prices, will be shipped from Cincinnati, O.

1 lb., common glass, per gross	$ 5 00
2 lb., " " " "	6 50
1 lb., flint glass, per gross	6 00
2 lb., " " " "	7 50
Corks for same, per gross	75
Tin Foil Caps for same, per gross	80
Labels for same, per gross	75

LONG RUBBER GLOVES.

FOR SIZE, lay the open hand, palm down, on a sheet of paper, and mark the outline of hand and fingers with a pencil. Price, by mail, $1.75.

WOODEN PAILS for HONEY.

WOODEN water pails, well-painted outside, with 3 iron hoops and a tight-fitting wood cover, at $2.25 per dozen. They will hold 25 lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

HONEY KNIVES.

IN using Bingham & Hetherington's Honey Knives only the thin, sharp, beveled edge rests on the combs, and the caps, after being cut off, slide up in large sheets and roll over on the knife, like shavings on a plane. They are 2-in. wide, tempered and finished like a razor, and will last a life-time.

Price, $1. By mail, $1.15.

Muth's Honey Knife, 50c.; by mail 65c.

BEES AND QUEENS.

FULL Colonies of Italian Bees, in Langstroth hives, bred to highest standard of excellence for all the best points, $8.00. Tested Queens, $2.00.

WIRING TOOL

FOR pressing foundation into wired frames—15 cents; by mail, 20 cts.

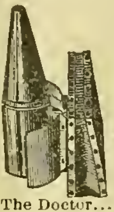
WIRE NAILS.

FOR nailing Sections, Cases, Frames, Racks, Crates, etc. The entire length of the nail being the same thickness, they do not loosen as ordinary iron nails will, and are not as liable to bend or break.

⅜ inch long,	wire No.	20,	per lb.	22c
½ "	"	19,	"	17c
⅝ "	"	18,	"	14c
¾ "	"	18,	"	13c
⅞ "	"	17,	"	11c
1 "	"	17,	"	11c
1¼ "	"	16,	"	10c
1½ "	"	16,	"	10c
2 "	"	15,	"	9c

If wanted by mail, add 18 cts. per lb. for postage. We can furnish larger nails, up to 5-in. long, when desired.

BINGHAM SMOKERS.



THIS is the first and only bellows Smoker ever made which would burn stove-wood. It burns any thing combustible, and needs no care except to be re-filled once in one or two hours. It works easily and will throw a stream of smoke ten feet. It will not go out nor wear out. It will save time stings and money.

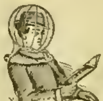
The Doctor	3½ inch,	$2 00
The Conqueror	3 "	1 75
Large, wide shield	2½ "	1 50
Extra Stand, wide shield	2 "	1 25
Plain Standard, nar. sh.	2 "	1 00
Little Wonder, wide sh.	1¾ "	65

Wholesale Rates, on application.

SEEDS for HONEY PLANTS.

White Clover—per bushel (60 ℔s)	$15 00
" " per peck. (15 lbs)	4 00
" " per pound	30
Melilot Clover—per bushel	$10 00
" " per peck	2 75
" " per pound	20
Alsike Clover—per bushel	$12 00
" " per peck	3 25
" " per pound	25
Bokhara Clover, imported, per lb	50
Mignonette—per oz., 20c.—per lb	2 00
Catnip—per oz., 10c.—per lb.	1 00
Motherwort—per oz., 10c.—per lb	1 00
Spider Plant—per oz, 20c.—per lb	2 00
Cleome—Rocky Mountain Bee-Plant—per oz., 15c.—per lb.	1 25
Figwort—or the Simpson Honey Plant—per oz., 20c.—per lb.	2 00

NEW BEE VEIL.



HAS 5 cross bars *riveted* through the center at the top. These button to studs on the neck-band. The bars are light spring steel; the neck-band is of hard spring *brass*; and the cover is of handsome light material. It is very easily put together—no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. It protects against mosquitoes, flies, bees, gnats, etc. The Veil weighs only 5 oz. Price $1.00.

GUMMED HONEY LABELS.

OF these we have 20 styles, and when ordered in quantities of 250, 500 or 1,000, we print the name and address of the apiarist. Prices range from 25 cents for 250, and upwards. Samples sent upon application.

MISCELLANEOUS.

Little Detective Scales, weigh 25℔ $2.50

Honey Gates for Extractors, 75c.

Gearing for Honey Extractors, $1.50.

Handles for Honey Gates, 25c; mail 40c

Novice's Metal Corners, per 100, 50c.

Wire Cloth, painted, 14 mesh, 8c. sq. ft.
" tinned, for Qu. cages, 12c. "
" " for extractors, 15c. "

Glass, 5x6 in., 240 lights in a box, $2.50.
Glass for shipping crates, per 100 lights
2¾x13½, for one-℔. sections, $2.50.
3⅜x16½, for two-℔. sections, $3.50

Whitman's Fountain Pump, $8.

Wire (for fdn.) oz. spools, 4c.; mail 6c
" " 1 ℔. spools, 40c.; mail 58c

Novice's Iron Blocks, for making his metal-corner frames, 15c; mail 25c

Queen Registering Cards, 10c. per doz.

Scissors, for cutting queen's wing, 50c

Ribbon Badges, 10c.; 100 for $8.00.
" rosette and gold lace, 50c

Rubber Sprinkler, $1.00; by mail, $1.10

Parker's Foundation Fastener, 25 cts. by mail, 40 cents.

Bee Veil (common), by mail, 50 cents.

Metal Rabbets, per foot, 1½c.

Registering Slates, 50 for $150;—100 for $2.50. Sample, by mail, 10c.

Felt Blankets, 35c. per lb. by express.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Aug. 18, 1886. No. 33.

Fifty-Two Dividends from the investment of one dollar is just what every subscriber to the AMERICAN BEE JOURNAL receives. Can any better interest be found for the investment of one hundred cents? If so, where?

* * *

Charles E. Gates, a bee-keeper of Gerry, N. Y., called a few days ago at the office of the BEE JOURNAL. He came all the way from New York on a bicycle. He was on the way to St. Paul, Minn.—looking up the country and taking notes of the crops, etc.

* * *

To Educate Consumers of Honey on the difference between the "strained" honey of commerce and pure extracted honey, is now the duty of the bee-keepers. The strained honey of commerce is obtained mostly from South America and the island of Cuba. Extracted honey is the pure nectar taken from the combs by centrifugal force, that the combs, which are of more value than the honey, may be returned to the hives to be again and again filled by the bees.

* * *

Dr. J. H. Kellogg, in his paper, *Good Health*, for August, takes back what he said about the adulteration of comb honey, as mentioned on page 443 of the BEE JOURNAL. He acknowledges that he was deceived by that *lie* of Prof. W. H. Wiley. If it was intended as a "scientific pleasantry," it is not very pleasant to be obliged to brand it as an unscientific lie every day. Wiley has done more harm by that falsehood than he *could* possibly balance with good, if he should live a thousand years.

* * *

The Editor of the AMERICAN BEE JOURNAL was on the 10th instant elected to the honorable position of "Grand Commander" of the State of Illinois, in "the American Legion of Honor," a life-insurance organization, having over sixty thousand members. This item may interest some of his apicultural friends; others will please pass it by unnoticed.

The Bees of Mount Sinai are mentioned by a correspondent of the *Leisure Hour*, I. B. Bishop, when describing a pilgrimage to Sinai. The sight was grand in the extreme, under the bright Arabian sun, with "the intense blue of the Arabian sky spreading in a clear vault of purity over the great expanse of naked mountains." Amid its awful sublimity the correspondent wrote these words: "I write from Mount Sinai. I wish I could linger here to stamp its form and surroundings indelibly on my memory." Speaking of the peak, where ,tradition says "the Law was given to Moses 3,500 years ago," the correspondent continues in these words:

> It looks as if it had been splintered by fire, frost and earthquake, most desolate and awful......
>
> Barren, naked, and blasted as is this peak of sublime memories, the *bees hum as gaily on it as on the thymy moorlands* of Tobermory; and on the awful front of Sinai a small forget-me-not raises its fragile cup to-day as though "blackness, darkness, and tempest" had never veiled the mountain with their gloom.
>
> As the early rose-flush gave place to day, each mountain peak, sun-kissed, turned rosy, and the red granite peaks became vermilion-colored. The splendor of the morning was nearly overwhelming, and the day has been perfect, absolutely cloudless, while the heat of the sun has been tempered by a keen north wind, which here, as elsewhere, gives a peculiar brilliancy and clearness to the atmosphere.
>
> In the glorious sunset the mountain landscape was seen to perfection. There was a complete carnival of color. I might multiply words without conveying ideas—it was indescribable. The colors changed constantly, ran one into another, faded, deepened, intensified, flamed. There were metallic gleams on the hill sides—orange, carmine, vermilion, brown madder, green-brown, red-brown, cobalt, indigo, lilac, buff, olive-green, blue-grey, green-grey, while as the sun declined and the shadows lengthened the ravines became filled up with red-purple, changing into violet-blue atmosphere, which faded into a tender grey, while the sky took to itself manifold tints of pink, green, red, and orange, the green brightened by delicate lines of pure vermilion.

The editor of the BEE JOURNAL can imagine something like the sublimity of Mount Sinai, when contemplating the views he obtained in company with Mons. and Madam Bertrand, in Switzerland, of that grand old mountain of light—Mount Blanc—which, at sunset, constantly changed color, the hues ever blending into each other; and also when viewing the eternally snow-capped mountains in the glacier region of the Alps. There, too, on the sides of the mountains are millions of honey-bees. One of the apiaries of Mons. Bertrand (our friend and brother editor who publishes the *Bulletin d'Apiculteur* at Nyon, Switzerland) is located on the side of a mountain in the Alpine region.

If bees are not fond of magnificent scenery, certain it is that they are found in many of the grandest portions of the earth.

* * *

J. E. Pond, Jr., writes us that he has lost his father, and as we know that his many friends will sympathize with him, we will quote this from his letter:

> I have just lost a dearly loved father, who was buried on Saturday last. The house is lonely now. No one can tell how much a father is missed till the loss comes; and in my case the loss is the greater from the fact that he has lived with me for 25 years. He was almost 78 years of age, and a "full shock ripe for the harvest."

Local Markets for Honey is what the BEE JOURNAL has been advocating for years, and believes it to be the only solution of the question of marketing the crop and keeping the prices up. Had our advice been followed, the present *low* prices would not have been reached. A correspondent writes as follows:

> I notice that great stress is placed upon creating local honey markets, by scattering the Leaflets, "Why Eat Honey?" I have been trying this plan, and find that it will greatly help to sell in a home market. If apiarists would give this subject more attention, instead of rushing the honey to city markets, it would be better for both the producer and consumer.

There can be no doubt about the efficacy of this method of educating the public concerning the use of honey, and we believe that if there were a judicious distribution of the Leaflets, entitled, "Why Eat Honey?" one crop would all be sold before another crop is produced.

Another point of vital importance is the fact that more than double the price can easily be obtained in the local market (when we consider the cost of barrels, transportation, commissions and leakage), than that price which can be obtained in quantity in the wholesale markets.

There are many methods of advertising honey for sale, which will be found to pay well. A sign at or near the residence or apiary with "Honey for Sale" in large letters, will be a valuable help. A few lines in the local paper, announcing the fact, will be valuable. Scattering "Leaflets" or "Honey as Food and Medicine," with the producer's card printed on them, will sell tons of honey in almost any locality. Just try it!

* * *

We have Received some samples of comb foundation which it is claimed are new inventions. Two samples are "*thin* foundation," made from *bleached* wax, which has proved decidedly objectionable to the bees in past years, the aroma and pliability of the wax having been lost in bleaching. Some of the first sent out by Mr. Hoge, being of bleached wax, caused its condemnation by several bee-keepers who tried it at that early day.

In another sample coarse cloth is dipped in melted wax, the cloth forming the "mid-rib," as the English apiarists call it, and is in fact the base of the cells. Still another is made on very coarse cloth, the threads being ¼ of an inch or more apart. These are both very objectionable, because the bees will very often amuse themselves by removing the threads, and thus "spoil the fun" of those who put the threads there.

We cannot see where the claims for "improvement" or "new invention" come in. The ideas are *old*, and the plans have been tried and discarded many times during the past 12 years.

* * *

Now is the Time to Join the Union.—Let every bee-keeper send for a copy of the Annual Report and Member's Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of $1.00) each year. Send to this office for the Report and Membership Blank.

QUERIES
AND
Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Priority Right of Location.

Query, No. 292.—Mr. A started an apiary 15 years ago. Two years afterward an agricultural association established a location for candy stands within 40 rods of the apiary; then 3 years ago they established horse-stalls opposite the fence where the bees were, and within 40 feet of the apiary. Would not the previous establishment of an apiary take precedence as a business location, with a sign, "Apiary of Italian Bees," put up at the time of locating the same; establishing the fact that the association knew well they were locating their grounds and stalls close to an apiary?—P., Wis.

I hardly think so.—G. M. DOOLITTLE.

Experience in bee-keeping will hardly help one to answer this. One good lawyer ought to tell more about it than ten bee-keepers. — C. C. MILLER.

I think you are correct. But if you were to take the matter into court it would depend on how good a lawyer you could get on your side.—H. D. CUTTING.

I should vote "aye," and in addition I would say that anything that Mr. A can do within the bounds of reason, to prevent his bees from annoying the horses and candy-makers, should be done.—W. Z. HUTCHINSON.

Not at all. Bee-keeping as yet is not so acknowledged as a business, either in law or by custom,as to allow it to become a nuisance or dangerous. Priority of occupation gives no rights in the matter.—J. E. POND, JR.

There is no law that covers such a case, so far as I know. It is a question of moral bearing, and a man on a horse will hardly see the rights of his neighbor who "fools with bees." Were I situated with my bees as you describe, I would use due care to prevent accidents and annoyances, and would firmly stand for my rights. Previous occupancy would have a strong moral bearing in favor of the bee-man.—G. W. DEMAREE.

I am not lawyer enough to decide. While Mr. A might and probably does have justice with him numerically, and doubtless financially he is the weaker party, and sorry as we may feel about it, "it is money that makes the mare go," especially when lawyers hold the reins.—A. J. COOK.

I should say Mr. P. has an indisputable right to keep his bees where they have had priority of location. The association could protect the candy-stands with screens at no great expense, and if the bees are not molested by the apiarist at the time the stalls are in use, I do not think the horses would be stung. Horses are driven within a few feet of my apiary almost every day without ever being stung, but I keep no ugly bees. —G. L. TINKER.

I think not, provided the annoyance of the bees rests in the fact that they sting animals outside of their inclosure, to any considerable extent. It is not a question of who began business first, but no man has any right at any time to keep bees in any place where they will go off from their owner's land to sting persons or animals in defense of their homes. It is my opinion that for no other act can bees justly be declared a nuisance. But if apiculture is a legitimate business at all, the bee-keeper has a right to keep bees, whether they eat grapes or not, no matter who began producing honey or grapes first. Bees must be considered free-commoners in every thing except the use of their stings, or else we must close up business. This is where, I think, it will end.—JAMES HEDDON.

Is Late Breeding Necessary?

Query, No. 293.—Is it considered necessary to keep up late breeding by feeding during a dearth of fall pasturage, in order to insure successful wintering?—R. P., Ills.

No.—JAMES HEDDON.

No, we do not do it.—DADANT & SON.

Opinions differ. I think not.—W. Z. HUTCHINSON.

Opinions differ. I think they might be the better for the feeding.—C. C. MILLER.

Not in my locality, if the bees have stores enough for winter. Late breeding is of no advantage in my apiary. —G. W. DEMAREE.

I think not, though at times it may aid not a little.—A. J. COOK.

Not by the writer. I have failed to reap any benefit by such a procedure. —G. M. DOOLITTLE.

It may not be absolutely necessary, but I think the colonies are in a safer condition to winter with a reasonable proportion of young bees.—H. R. BOARDMAN.

No; old bees will winter as well as young ones. For several years my bees stopped breeding in September, and came through in good condition. —H. D. CUTTING.

While it may not be necessary to keep up late breeding in order for successful wintering, it is all-important for a colony, either in the North or South, to go into winter quarters with from 20 to 30 pounds of stores, if we desire the colony to come out strong and prove profitable the next season.—J. P. H. BROWN.

Opinions differ. I am decidedly of the opinion myself that it is necessary; others seem to think that old bees will winter as well as young ones. I prefer a full colony of young bees to go into winter quarters with. —J. E. POND, JR.

No; but they must have pollen or bee-bread to begin breeding in late winter at the usual time, about Feb. 1. In fact I know of no reason why any bees should not have bee-bread in winter as nature has provided.—G. L. TINKER.

Buckwheat for Honey.

Query, No. 294.—If a bee-keeper has one acre of buckwheat, and the season is favorable for a good flow, would it do 100 colonies much good, if they have nothing else?—Indiana.

Not much.—W. Z. HUTCHINSON.

"No."—JAMES HEDDON.

I cannot say, but I should think it might be valuable if the season was favorable.—A. J. COOK.

Not much.—G. M. DOOLITTLE.

No, though it will be better than nothing.—DADANT & SON.

One acre of buckwheat in the most favorable season would only be a drop in the bucket divided among 100 colonies of bees.—J. P. H. BROWN.

I do not think it would; 100 colonies of bees require a number of acres of the best bee-forage to make surplus. To produce a large surplus there must be hundreds of acres of white clover. —G. L. TINKER.

It might possibly keep them stimulated to constant brood-rearing, but would be of little value otherwise. Still it would be of value so far as it would go round.—J. E. POND, JR.

It would be a little help to keep them busy, but if there was nothing else you would not get any honey from the buckwheat. When it is a good season for buckwheat it is good for the blossoms of other plants.—H. D. CUTTING.

It would keep the bees busy a few hours in the morning and give them a little honey for daily consumption. I doubt if a single acre of buckwheat will yield a gallon of nectar, accessive to the bees, each day on the average, and this perhaps would represent a quart of honey—a mere taste for 100 colonies of bees. It requires a widespread supply of honey-producing flowers to give bees profitable employment.—G. W. DEMAREE.

It would do them one acre of good, and ten acres would do more good. One acre might keep up breeding if that is desired; as, according to estimates I have seen, an acre of buckwheat yields on a good day 25 pounds of honey, thus giving ¼ pound to each of 100 colonies.—C. C. MILLER.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ~O northwest; O~ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Teasel—Its History and Value.

G. M. DOOLITTLE.

From the numerous letters I am getting each mail relative to teasel and its cultivation, I judge I cannot please the readers of the BEE JOURNAL better than to give an article on this subject, in which I will give all the facts regarding it, as far as I know them. There are others, like C. M. Goodspeed, of Thorn Hill, N. Y., who might tell more of the mode of cultivation than I can, and if any are expecting to go into teasel raising it would be well to write to him.

Among my first recollection of this plant aside from the wild ones growing over the greater part of the United States, was this story which was told in this locality for a fact, the truthfulness of which I have no reason to doubt:

A young Englishman came to this country and went to the house of a farmer who possessed the title to 100 acres of good land, but who owed a rich neighbor for nearly the full value of the land. This Englishman had no money, but proposed to put in 5 acres of teasels on shares on the farmer's land, and if possible work enough for the farmer to pay for his board and clothes, besides tending the teasels. He convinced the farmer that there was money in this, to the farmer an unheard-of plant; so the farmer consented. The next year he proposed to put in 10 acres more, they to hire the money to procure the needed help to harvest the first 5 acres (as it takes 2 years to grow teasels) and tend the others. The farmer reluctantly consented to the proposition, but finally trusted to the knowledge of his English friend. To make the story short, the teasels made the large yield of 300,000 per acre, and were sold for $5 per thousand, thereby taking both from poverty and making them well-to-do in the world, the farmer paying for his farm and having money beside.

This caused a great "boom" in teasel culture here, so that teasels went down, down, till the price of 40 cents per thousand was reached. As 75 cents per thousand is about as low as teasels can be raised, and pay for the cost of production, of course a reaction took place, which, together with their winter-killing so badly of late years, made the acreage sown very small from 1877 to 1884. However, many of the farmers raised some each year, some holding the crop for higher prices. During the fall of 1884 the price went up to $2 per thousand, and in the spring of 1885 a large acreage was again sown throughout the teasel belt, so that while I write millions of teasel are just going out of bloom within from one to ten miles of here, the nearest piece being one mile distant, while from three miles on, is the range of flight my bees have to make to get where teasel is plentiful.

TEASEL CULTURE.

The plant is bi-ennial as a rule, although a part of the smaller plants may not produce teasels or heads till the third year. Such three-year-old plants are called "voors." The ground for teasels is prepared as for corn or potatoes, the rows being 3 to 3½ feet apart, the marks being made only one way. The seed is now sown in the marks, and, as a rule, left for the rains to wash in. The ground should be fitted as early in the spring as possible. If a little late, it is well to brush the seed in.

When the plants first come up they are very small, and the caring for them is a tedious, back-aching job, about the same as it would be to care for carrots, onions, or beets. The plants are cultivated and hoed, or *should* be three times. Farmers usually plant beans or turnips between the rows the first year so as to get a little something to pay expenses during the first season. Latterly, since they have winter-killed so badly, corn is planted between every third or fourth row, which is "topped," and after husking the balance of the stalks are left standing to catch the snow which is a great protection to them.

The second year, during the month of May, they are cultivated and slightly hoed, when they are left to "run," as it is termed. The largest or first heads at the top of the stalk are called "kings," and commence to bloom about a week before basswood, or from July 1 to the 10th, continuing in bloom for about a week or ten days. The first blossoms appear a little above the centre of the head, blossoming toward the tip and base, and ending off at the base. As soon as the blossoms have all fallen off they are cut with a stem about 6 inches long on each head, drawn to the barn and stored about 6 inches deep on scaffolds to cure. When cured they are put into large boxes and shipped to manufacturers for the purpose of raising "nap" on cloth. The "middlings," as they are termed, commence to blossom when the kings are about half through, and the "buttons" come last, making from 20 to 30 days of bloom, according to warm or cool weather, from the commencing of the kings to the ending of the buttons. The middlings and buttons receive the same treatment as the kings, and all are mixed and sold together, 10 pounds making a thousand.

While an extra good acre may yield from 250 to 300 thousand, there are more acres that do not yield one-third of that amount, say nothing of the hundreds of acres which winter-kill, except a small margin around the fences where the snow-drifts protect them.

TEASEL FOR HONEY.

Since my articles regarding this plant in 1876, 1877 and 1878, hundreds have written me, saying that bees do not work on teasel with them. It is evident that the "teasel with them" is the wild kind, upon which I never saw a bee at work. All the illustrations of this plant that I have ever seen, portray a head of the wild teasel, as the spines are always pictured as standing straight out, the same as they do on the wild kind, while on the tame variety, or fuller's teasel, these hundreds of spines all hook down like the upper bill of a hawk, and are almost as strong. A tame teasel head thoroughly hooked into a garment cannot be pulled off without tearing the cloth, unless the cloth is very strong. I have dwelt on this part thus at length so that all could understand.

Bees work on teasel all hours of the day, and no matter how well basswood may yield honey, a few bees will be found at work on teasel. A bee that works on teasel is readily distinguished from those at work on basswood, by the tip and upper part of the abdomen being covered with a white dust. By this means it is easy to tell what proportion of a colony is at work on this plant. Black and hybrid bees work on it in larger proportion than do the Italians. For instance, when both basswood and teasel are in full bloom, about every fourth bee in a hybrid colony will have this dust on it, while not more than one out of 12 to 16 will show it with the Italians.

The honey from teasel is very thin and white—in fact, the whitest honey I ever saw—but it is not of as good flavor as either clover or basswood. This thinness of the nectar, and its coming just when basswood does is the great drawback to it. From careful tests I should say that it would take four bee-loads of it to be equal to one bee load of nectar as gathered from basswood, or seven loads to be equal to one load of ripened honey. Then, coming as it does *with* basswood, makes it of no great advantage except that it usually lasts from 6 to 10 days after basswood is gone, so it helps to finish up partly-filled sections.

Again, my bees have to fly from 2 to 10 miles to get at this thin nectar, as I am on the most southern edge of this teasel belt. According to those who believe bees only fly 1½ to 2 miles for honey, I should not get anything from teasel, but to quiet their fears I will say that I have repeatedly seen my bees flying to and from the teasel fields, from our church door, which is 2½ miles from my apiary in line with the fields.

As to about what proportion of my crop of honey has come from teasel the past 15 years, I should say about one-tenth; some years more, and some years not a single pound. In 1877 I got the largest yield, while from 1878 to 1884 little if any was obtained.

Mr. Camp, on page 458, seems to think that I am trying to keep the matter of teasel as a honey-plant a secret; but such is not the case. I have sent out package after package of the seed to different individuals, and have written hosts of letters giving instructions how to grow it, and had supposed that all were aware of what I had witten.

In conclusion let me say that I have no seed to sell, nor the time to write further on the subject, for there is in this article all I know about the plant. If any are desirous of trying teasel in their locality, I presume Mr. Goodspeed will furnish any farther instructions that they may desire.

Borodino,⊙ N. Y.

Guelph Central Convention.

The *Guelph Mercury* of August 5, reports the proceedings of a meeting held the day previous for the purpose of organizing a bee-keepers' association. Mr. Thos. Simpson was elected chairman, and A. Gilchrist was appointed secretary, *pro tem.*

Mr. R. L. Mead spoke of the advantages to be derived from such an organization. The Rev. W. F. Clarke, R. F. Holtermann, of Brantford, and others made some remarks on the same subject. It was then moved by Mr. Clarke that a bee-keepers association be formed, called the "Guelph Central Bee-Keepers' Association."

The following officers were then elected: President, the Rev. Wm. F. Clarke; Vice-President, J. Ramsey; Secretary-Treasurer, A. Gilchrist.

A discussion followed on the hibernation theory. R. L. Mead did not believe in the theory. He explained his method of wintering bees, with which he had been very successful. He keeps the temperature of his bee-house at 45° to 50°. J. Ramsey wished Mr. Clarke to explain his theory of hibernation, as he did not understand how bees could enter such a state.

Mr. Clarke then explained at some length his experience and views on the theory which he claimed to be the father of, until recently, when he discovered to his surprise that Prof. A. J. Cook had enunciated the theory in February, 1875.

A general discussion followed on the marketing of honey, all taking a part. The convention adjourned to Mr. James Goldie's grounds to see a new honey-plant, fifty specimens of which had been sent to Rev. W. F. Clarke in the spring for trial, by Mr. Hiram Chapman, of Versailles, N. Y., and of which Mr. Goldie had kindly taken charge. Though it was late in the afternoon, bees of all sorts and sizes were working on it very busily. It was generally agreed that, from all appearances, the bees must be getting considerable honey from the plant, but whether it was desirable or safe to have it generally cultivated could not be determined without further knowledge of it,

Mr. Goldie's grounds and garden looked their best. The evergreens, shrubs and trees were carefully inspected, but the aviary, in which are many choice foreign birds, seemed to take the eye. All present were very much delighted with their visit. A vote of thanks was tendered Mr. Goldie for his kindness and attention. This brought to a close the first and very successful meeting of our new Association.

For the American Bee Journal.

The Chapman Honey-Plant.

N. W. M'LAIN.

The committee appointed by the North American Bee-Keepers' Society to investigate the merits of a honey-producing plant now being cultivated by Mr. Hiram Chapman, of Versailles, N. Y., met at that place on July 28. One member of the committee, Mr. Manum, of Vermont, was unavoidably detained at home. Mr. Chapman exhibited a specimen of this plant and made representations concerning its value to bee-keepers at the Detroit convention in December, 1885, which led to the appointment of a committee which was instructed to investigate and report at the next annual meeting of the society.

This plant, which Dr. Beal, of the Michigan State Agricultural College, tells us is *Echinops Spherocephalus*, and native of Central France, is, by common consent, beginning to be known as the Chapman honey-plant, thus designated on account of Mr. Chapman being first to cultivate the plant in this country, and first to call the attention of those engaged in bee-keeping to its value as a honey-bearing plant.

The appearance of the plant has been well described by Mr. T. F. Bingham, on page 487, where he says: "It grows from 3 to 4½ feet high, each root or crown bearing from 6 to 16 round buds or heads, from 1 to 1¾ inches in diameter. These heads all stand upright, and the entire surface is covered with small white flowers having bluish stamens." The stalks and leaves so nearly resemble those of the thistle that were it not for the head, this plant might easily be mistaken for the thistle. There is, however, in this particular, a very marked difference, the appearance of the head being aptly described by its bontanical name—round headed, and in appearance like a hedge-hog.

The flowerets on the top of the head open first, then they open later along the sides, continuing in the order of nature around the entire surface of the sphere. Near to the stem the last flowerets open, after the blossoms on the top of the heads have disappeared, and the seed capules of the first blossoms have hardened. Unlike the thistle the seeds are provided with no balloon by which they may be borne by the wind. The seed is in weight and appearance very like a small grain of rye, is enclosed in a capsule and falls directly to the ground if not seasonably gathered, not spreading more than oats if left to fall without harvesting.

From the time of the first appearance of bloom upon the top of individual heads until the fading of the last blossoms on the lower half of the head near to the stem, is about eight days, the continuance of bloom depending upon the nature of the soil and the season; but the heads or buds sent out from each individual shoot and forming each individual cluster, vary in age and size, so that the natural term of blooming and honey-bearing may safely be reckoned at from 20 to 30 days.

The term of blooming may, however, be prolonged to a considerable extent by cutting back a portion of the plants, and the facility with which the honey harvest may thus be prolonged, constitutes an important feature when estimating the value of this plant.

The plant is hardy, easily propagated, and perennial, and appears to flourish in all kinds of soil, and there is no danger of it becoming a pest or noxious weed. It does not bloom until the second season, and as it does not spread, its extirpation would be easily accomplished. It may be planted in waste places, or it may be sown in drills or hills like onion seed. It seems to be characteristic of the plant to root out all other vegetation and take possession of the soil. No weeds and but very little grass was seen growing in the three-acre plat observed.

As to the value of the plant to the honey-producer, there appears to be no room for doubt, whether quality or quantity, or both be considered. Within reach of Mr. Chapman's apiary no other resources were accessible for honey-gathering, the severe and prolonged drouth having destroyed all other honey-yielding blossoms, and yet in some instances the bees were making an excellent showing in the hives.

The number of colonies (about 200) foraging upon the three acres in bloom was, however, so great that no definite conclusion could be reached as to the probable returns in pounds of honey from a given area. That the returns would be highly satisfactory is evidenced by the fact that the entire area was "alive with bees," and they visited the flowers from daylight until dark, and sometimes eight or ten bees were upon a single head at one time. Mr. Hubbard, who is cultivating some of these plants obtained from Mr. Chapman, reported that he had counted the number of visits made by bees to a single head from 5 a.m. to 7 p.m. He reported the number as being 2,135, actual count.

In order that the committee might have some idea of the quantity of nectar secreted in the flowerets of a single head, the day before our arrival, Mr. Chapman had wrapped a thin paper about a head, the half of which was in full bloom, and tied the paper around the stem with tape, thus preventing the bees from appropriating the nectar for 24 hours. I cut off the tape, and removing the paper, held up the ball before Messrs. A. I. Root, L. C. Root, and others—the flowerets were dripping nectar, and the drops sparkled in the morning sun, and their eyes sparkled with delight and astonishment. I have made similar tests with like results, using the plants which I have here at this Apicultural Station.

Mr. Chapman has distributed this plant over a wide extent of country, from Vermont to Nebraska, and each member of the committee has been furnished with two-year-old plants for cultivation and observation during the present summer. All the facts obtainable will be given to those interested when the committee make their formal report to the Society at the next annual meeting.

U. S. Apicultural Station, Aurora, ♀ Ills., Aug. 5, 1886.

For the American Bee Journal.

Honor to Whom Honor is Due.

JUSTICE FAIRMAN.

I am surprised at the latter portion of Mr. Demaree's article, on page 501, wherein he condemns the double brood-chamber, and lays claim to the one-half bee-space, as he did to the double brood-chamber on page 102.

As a reason for my surprise, please allow me to quote the following, as found on page 102, where, in criticising Mr. Heddon's new hive and principles, Mr. Demaree says:

"As to the utility of a hive made in horizontal sectional parts, I am not without experience. I have experimented in that direction for the past six years, and I now have bees wintering in a hive made of cross sectional parts, only 5⅝ inches in depth. When the bees were prepared for winter, in September, they were shut down in a single sectional part of the hive, the frames being only 5½x17⅜ inches, outside measure. I have experimented quite extensively with the sectional shallow-frame cases, using them for brood rearing, tiering them up to suit the size of the colony, and for queen-rearing, using a single sectional case; and I have employed them largely for taking extracted honey on the tiering-up plan......In the discussion between my distinguished friend, Dr. Southwick and myself, published in the AMERICAN BEE JOURNAL, Vol. 19, pages 370 and 371, I mentioned my shallow-frame system, using it as an argument in favor of shallow frames."

Near the close of this criticism of Mr. Heddon's one-half bee-space, Mr. Demaree says: "It is proper to say that the frames are adjusted in the case, so as to leave a shallow bee-space both at the top and bottom of them, and the case will work with either side down or up. Comment is unnecessary."

Now imagine my surprise at reading the following on page 501:

"The idea of a shallow bee-space at the top and bottom of the frames and section-boxes originated with myself, though I notice that this idea is prominent in Mr. J. M. Shuck's patent hive, a sample of which I have in my apiary; but I suppose that Mr. Shuck does not claim this as his property, as it would be impossible to define what a "bee-space" is, in actual measurement.

"After trying the double-brood-chamber hive pretty thoroughly, I feel sure that it will never come into general use. Those who wish to manipulate all the honey out of the brood-nest into the surplus department, with the view of feeding cheaper food than honey to their bees for winter stores, and have no qualms of conscience if some of the "cheaper food" does go into the surplus at the beginning of the early honey harvest, will probably hold on to the tiered brood-chamber for sometime to come, or until the honey business is well nigh ruined."

This does not seem to harmonize with Mr. Demaree's criticisms as cited from page 102. Allow me to quote from Mr. Hutchinson's article on page 152. Speaking of Mr. Heddon's new hive in reply to Mr. Demaree, on page 102, he says: "There can be no imaginary question as to the newness of thus arranging frames so as to have the bee-space on either side, or divided between both, at will."

Here allow me to quote from Mr. Heddon's book, page 123: "The term 'bee-space' does not only denote a space that will admit of the passage of a bee, but it refers to that space in which bees are least inclined to build brace-combs or place propolis, or bee-glue; which is a scant ⅜ of an inch."

On page 214. Mr. Heddon lays down six of the claims of his late invention. No. 2 reads as follows: "Arranging frames within a case which is bee-space deeper than the frames, in such manner as to leave one-half of that bee-space on either side of the frames."

We also find it clearly described on page 91 of his book. If Mr. D. has read that book, I do not see what prompts him to mention Mr. Shuck, and ignore the one who first made it public, and I believe first invented it. I am not talking about patents, but about respectfully and honestly giving "honor to whom honor is due;" and here allow me to quote from Mr. Heddon, from page 53 of the AMERICAN BEE JOURNAL for 1885, wherein he is discussing the question of the moral rights of inventors. He says:

"Let the prior inventor remember that such priority is not enough for a claim of 'right.' We have no money or time to spend settling complicated claims of secreted priority. The first man who benefits us all by publishing, thus giving to us the advantages of his invention, let us hold entitled to all the honorary and financial benefits accruing from such discovery, and the exclusive right of manufacture of the same for a reasonable length of time."

The above strikes me as being in harmony with reason and justice, and precludes the wrongs that might be perpetrated through falsehood. Upon referring to Mr. Demaree's cited controversy with Dr. Southwick, I find that his shallow sections were all surplus sections, and that the brood-apartments used by him are plainly described as one story, and of Langstroth depth. I have used Mr. Heddon's divisible brood-chamber, and I consider it of immense value, and firmly believe that the same conclusions will be formed by others who are testing it. Let us see, when they report.

Louisville, ♂ Ky.

For the American Bee Journal.

Having an Ax to Grind, etc.

C. W. DAYTON, (200).

On page 409 Mr. Heddon says that he does not see why I should acknowledge any such motive as having an "ax to grind," when I described the "queen-restrictor," on page 393, unless I wrote for the purpose of extolling the merits of the manufacture with a pecuniary end in view. I think that I did not acknowledge such motives, but suggested that *some* might acknowledge it for me; but in that it might be possible that I judged too strongly. I gave the "ax to grind" statement from a remembrance of its having been employed to show that the description of fixtures described were not for advertisement; and as such action would be stealing advertising space, and very discreditable, I asked if there would necessarily be discredit connected therewith, if I wrote because I had an "ax to grind;" as I believed that it might be for the purpose of gaining glory, or what would appear better in the public press, mutual benefit.

As Mr. Heddon cannot see (from his stand-point) my arrangement as at all practical, etc., I thought of predicting in my former article, presuming such stand-points to be on the roof if not behind a sectional hive, to which hives my arrangement cannot be adapted. Doubtless he has formed connubial relations with the idea that the revolutionizing of bee-keeping must incur a full change of hives and contents instead of the simple arrangement of a few ordinary frames.

It is my opinion that the sections should be where the bees wish to put the honey, instead of shutting them up (from the queen) in an out of the way place, and then attempting to drive the bees into them. On the whole, it is much like the stock laws in some sections of our country, where $100 worth of fencing is used to confine $10 worth of stock in the highway; while $10 worth of pasture fence would restrict $100 worth of stock, and save an immense amount of labor and care.

Bradford, ♂ Iowa.

For the American Bee Journal.

The Iowa State Convention, etc.

O. CLUTE.

President Poppleton, of the Iowa State Bee-Keepers' Association, has issued a call for the annual meeting of the Iowa Association on the Fair Grounds, in Des Moines, on Tuesday, Sept. 7, at 2 p.m. The association, in accordance with a plan suggested several years ago, has procured a large tent which will be put up on the Fair Ground, and will be used for the meetings, for the head-quarters of the President and Secretary of the association, and for the convenience of bee-keepers generally.

All Iowa bee-keepers should make an effort to be present at this meeting. Matters of importance to all will be discussed. Come prepared to state your experiences. Tell us where you have succeeded, and on what your success was based. Tell where you have failed, and what were the causes of your failure.

These meetings are open not only to the bee-keepers of Iowa—bee-keepers from all parts of the world are welcome. All are heartily invited. It is probable that some of the bee-men can bring blankets with them, and find a place to lodge in the tent.

The Iowa State Fair is in progress from Sept. 3 to the 10th. For many years this Fair has been a very large and important one. This year the Society has new grounds and new buildings, all arranged and built in accordance with the suggestions of those who have had much experience in Fairs. It is believed that when the grounds and buildings are all complete they will be equal to anything, for the same purpose, in the world. The new grounds and buildings are giving such an impulse to all classes of exhibitors throughout the West, that it seems probable the exhibit in all departments this year will be even better than in years just passed. It will richly repay a visit.

This has been a good year for bees, in spite of the dry weather. The honey crop is large in quantity, and of very superior quality. The bee-keepers of Iowa and adjacent States should see to it that a very large and instructive exhibit of bees, honey, and implements is made. The State Agricultural Society has offered generous premiums in the bee-department, which are open to competition from the whole world. Come, all of you, and bring your exhibits along.

The Inter-State Bee-Keepers' Association meets at St. Joseph, Mo., on Sept. 1. This is the week of the St. Joseph Exposition, which has become famous for its size and excellence. It also gives generous premiums in the department of bees and honey, and the exhibit in this department has been for several years a good one. Bee-keepers everywhere should bear in mind this exhibit, and make a display at it. And they should not fail to attend the meetings of the Inter-State Bee-Keepers' Association.

Parties desiring to see the list of premiums offered in the department of bees and honey at the Iowa State Fair, can get a copy of the premium list by addressing Hon. J. R. Shaffer, Secretary of the State Agricultural Society, Des Moines, Iowa. Those wanting the St. Joseph list of premiums can get it by addressing E. T. Abbot, Secretary of the Inter-State Bee-Keepers' Association, St. Joseph, Mo.

Iowa City, Iowa.

For the American Bee Journal.

Bee-Keeping in Cuba, etc.

A. W. OSBURN.

It affords me much pleasure to read the reports of a bountiful honey crop nearly throughout the United States, for the efforts of the bee-keeper is none too well paid at best. With us the outlook is not so bright. For the last three months we have been feeding our bees, and shall have to continue to feed for at least three and one-half months longer. The good reports that have been made from time to time from this Island have been the aggregate amount of honey from the country, not from any one apiary or locality, which, in the poorest season, would make quite a respectable showing, for the reason that it seldom happens that the eastern end of the Island fails to produce a tolerably fair crop of honey, as in that locality are large tracts of woodland, swamps, low lands, creeks and rivers, and this is where the bulk of the bees of Cuba are kept. There is more rain there than in the western end of the Island. Then these forests and swamps (some of them at least) are little more than a matted mass of bell-flower vines, which is the best honey plant of Cuba.

Again, these low lands are in the interior, removed from the influence of the coast winds that sweep along the country near the ocean in the winter months, making the secretion of honey an impossibility, for several days at a time. Yet it is not so hard for an American to choose between these two localities, the one near to Havana and the coast, or removed from both. In the former he has protection of life and property, and the chance of securing an average crop of honey (or what would be called an average crop for most countries); while in the latter, with the almost positive assurance of a big yield of honey, he is removed from the protection that the country near Havana affords; compelled to live in a very thinly settled country, away from society, a long ways from shipping points, with transportation to and from his apiary the most difficult, owing, in the main, to the bad roads, which, in Cuba in the rainy season, are almost impassable, and then only by an ox-cart, with from 2 to 4 yoke of oxen on a cart to draw 2 casks of honey.

We are located 10 or 12 miles west of Havana, on as good a road as Illinois or New York can produce; and in a thickly settled country, free from all the annoyances of life in the interior of Cuba.

I send a hearty welcome to the new members of the National Bee-Keepers' Union, and a word of encouragement to the old ones, that they may never flag in their efforts and determination to protect the rights of bee-keepers.

Cuba, W. I.

For the American Bee Journal.

Feeding Sugar to Bees.

W. Z. HUTCHINSON.

What grand, good times we do have in the columns of the "old reliable" AMERICAN BEE JOURNAL! How I do enjoy these apicultural discussions; especially when so conducted that, when the battle is over, each combatant stands higher in the estimation of his opponent. This "sugar feeding" controversy promises to be of that character. I shall *try* to be fair and courteous, and I think that my opponents will be.

Although probably unintentional on the part of Mr. Wright (page 472), I think that his quotation from my letter on page 411, does not fairly represent the meaning that I intended to convey. He says: "Mr. Hutchinson claims that 'when bees are undisturbed by man's reason, they meet an untimely fate.'" Beg pardon, Mr. W., I did not make such a claim. I said, in substance, that the opposing of sugar feeding upon the grounds that it was "against nature" was ridiculous; then I said (now let me give the *whole sentence* from which Mr. W. quoted): "Did bees never perish when left to 'their own sweet will' in *all* things, this argument would be more forcible; but *when undisturbed by man's reason, the bees meet an untimely fate*, it is evident that nature has made a mistake somewhere." (I have italicized the part that Mr. W. attempted to quote.) Does not Mr. W. see that I did not claim broadly that "when bees are undisturbed by man's reason, they meet an untimely fate?"

The point is just this: We have been repeatedly informed that honey and pollen is the *natural* food of bees; it is "according to nature" that they should live and thrive under its consumption; that it was the height of folly to say that death lurked in *nature's* food. Some bee-keepers very foolishly (?) neglect to clip the wings of their queens, and, as a consequence, a swarm occasionally hies away to a forest home of its own choosing—to a home furnished by *nature*—it stores *natural* food and leads a *natural* life until—it dies of diarrhea during some "disastrous winter." Nature made a mistake. Is it any more inconsistent to say that the mistake lay in the food she furnished, than that it lay in some of her other furnishings?

Mr. Hill asks: "Who has fed cane-sugar since the foundation of the world in order to keep the race extant?" Honey differs in character. Seasons vary. Localities are not all similar. The world is large. It seems there has always been enough good honey, or good *something*, *somewhere* in the world, so that bees enough for seed have always been left. Apiarists are endeavoring to ascertain under exactly what conditions bees will always winter successfully. We can put bees in a repository and keep the temperature at any desired point. We can do this year after year. If moisture and ventilation have any bearing upon the problem, these can be controlled. I think that few, if any, dispute that food is a factor in the problem. The food cannot be unvarying in character, in all instances, if we "follow nature."

Mr. Wright says (page 472) that his father rarely lost bees when he kept them in large box-hives, and "left them to their own sweet will," but when he began to put on boxes and take all the early honey, and compel the bees to live on pollen and poor honey, then they began to die. He also mentions a man who hives his bees in large box-hives, leaves them to "their own sweet will" and loses no bees. Let me ask, where is the profit in such bee-keeping?

Living about 16 miles from here is a bee-keeper who, a few years ago, kept black bees in large box-hives, leaving them undisturbed. He seldom lost bees, and ridiculed Italian bees, movable-comb hives, etc., attributing the loss of bees to these "new-fangled fixin's." Finally, in one of those "disastrous winters" all his bees died "just the same" in spite of their being so nearly free from man's disturbing hand.

Mr. Wright thinks that if the bees have gathered no honey, and need feeding, it may be all right to feed sugar rather than let them die. This is exactly the line of reasoning followed by those who advocate the use of sugar for winter stores, viz: that "it may be all right to feed sugar rather than let them die"—of the *diarrhea*.

I agree with Mr. Hill in thinking that the difference in price between extracted honey and sugar is so slight that it is doubtful if it would be profitable to extract the honey and substitute sugar, *i. e.*, laying aside the superiority of sugar as a winter food; but when we can so manage that nearly all the honey is stored in the shape of comb honey in sections, the price of which is at least twice that of sugar; and all we have to do is simply to put on a feeder and feed the sugar syrup to the bees, then the difference is not quite so meager. Mr. Hill says that those of whom he wrote would not feed sugar because it would lower the price of honey. Farther along he quotes Mr. Wright as saying that "sugar feeding or bee-keeping has got to go down." Mr. Hill adds: "Nothing will put bee-keeping down so quickly as putting down the price of honey." Whether lowering the price of honey will "put bee-keeping down" depends altogether upon *what* lowers the price. If it is lowered as the result of an increase in the number of producers, then bee-keeping, or rather a large number of bee-*keepers* will go down. It will be the "survival of the fittest." But when the price of honey goes down as the result of using improved hives, fixtures and appliances, and of adopting superior methods of management, *then* bee-keepers are more prosperous than ever. As the price of a commodity decreases, its consumption *increases*, and the demand becomes more steady.

Mr. Hill says the using of sugar by bee-keepers has put down the price of honey. Let us suppose, for the sake of argument, that the use of sugar by bee-keepers *has* lowered the price of honey; has it not also lowered the *cost?* Did not the extractor lower the price of honey? Has not comb foundation cheapened honey? Has there been a single improvement in bee-keeping that *did not* cheapen honey?

Mr. Hill says: "Recall the most successful apiarists, then find out how many feed sugar, and draw your own conclusions." Did I not say, in a former article, "The advice to feed sugar for winter stores is not intended for those who are uniformly successful with natural stores?" but what shall those do who are *not* successful?

Mr. Hill further asks, "Are there not twice as many bees wintered successfully on their natural stores as there are on sugar?" To get at the true inwardness of the matter, he *should* have asked for the *pro rata* loss of bees wintered on sugar stores, compared with that of those wintered on natural stores.

The only *fair* objection that can be brought against the use of sugar for the winter stores of bees, is that "it *may* assist in giving color to an *unjust* accusation," in the same manner that the use of foundation "*may* assist in giving color to an *unjust* accusation." As my opponents failed to notice this point, I will again repeat, "Shall we stop using foundation?"

Rogersville, δ Mich.

* * *

For the American Bee Journal.

Reversed Queens, etc.

REV. M. MAHIN, D. D., (40).

On page 501 of the current volume of the AMERICAN BEE JOURNAL, G. W. Demaree tells of young queens having their heads the wrong way in the cells, and not being able to cut their way out. I have more than once found young queens in that condition, but at the same time I discovered how it happened, and there is no mystery about it at all. When a young queen cuts out of the cell she does not always wait to cut off the whole circumference of its end or point, but leaves on one side as it were a hinge. This allows the lid to close so neatly that one may handle the cell, as I have repeatedly done, without observing that the queen had cut out.

As a further fact to be considered, it should be rembembered that there ought to be some of the so-called royal jelly left in the cell when a queen hatches; and in search of this she in many if not in all cases, re-enters the cell. If the end be open she can back out, and no harm will be done; but if the lid of the cell is still hinged to it, and makes a close fit, the bees crawling over it will close it so tightly that the queen will not push it open, and she will perish in her prison. I have found queen-cells from which queens had hatched with the lids waxed fast. Whether it was done by accident or design I cannot say.

It is not at all likely that in any case a queen would be in a reversed position in the cell. She could not spin her cocoon in that position without spinning it at the base of the cell; and, in fact, while spinning it her weight and her motion would so crowd her down into the point of the cell that her normal development would be impossible, and, further, her food would be at the wrong end and separated from her by the web of her cocoon. In view of these facts I do not hesitate to express the opinion that a careful examination of the cells, in the case of Mr. Demaree's reversed queens, would have revealed the fact that they had been opened, and that the queens had re-entered them. I hope that if he shall find another case of the kind he will carefully examine the point of the cell.

THE SEASON OF 1886.

In this part of Indiana the season has been very dry; and yet there has been a fair yield of white clover honey. The yield has been very much better than I would have supposed, in view of the small amount of rain. Basswood was an entire failure; only a few of the trees bloomed, and the few that did bloom yielded little or no honey. All of my bees except one colony are still at New Castle, Ind. I have no place here where I can keep them; and so when I want to see how they are doing I must take a railroad trip of 60 miles. At New Castle there has been much more rain than here, and if I could have given my apiary proper attention I would have had a fair yield of white clover honey. But though basswood trees abound within reach of my bees, there is not the slightest trace of the peculiar aroma of basswood in the honey.

I miss my bees very much, as I take great pleasure in manipulating and observing them. My one colony in this place is six blocks from the parsonage, and is not visited very often.

Bluffton, δ Ind., Aug. 12, 1886.

* * *

When Marketing Extracted Honey, it is a sad *blunder* to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

Local Convention Directory.

1886. *Time and place of Meeting.*

Aug. 18, 19.—Cedar Valley, at Waterloo, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Sept. 6.—N. W. Ills. & S. W. Wis., at Dakota, Wis.
Jonathan Stewart, Sec., Rock City, Ills.

Sept. 7.—Iowa State, at Des Moines, Iowa.
A. J. Norris, Sec., Cedar Falls, Iowa.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bee-Keeping in Minnesota.—J. W. Powell & Son, Mankato,♀ Minn., on Aug. 4, 1886, writes:

The weather has been generally dry here this season, still we have had local rains covering a small tract of country in our immediate vicinity. I think this county (Blue Earth) will have the best crops of any in the State. We will have an average yield of honey this season. We have taken about 4,500 pounds of extracted, and have about 4,000 pounds of comb honey ready to take from the hives. We began in the spring with 140 colonies in Simplicity hives, and have increased them to 240, by natural swarming. The prospect is good for a fall yield of honey. Why do not more bee-keepers join the Union? Is it because men always neglect their bees and their preacher when they are short of money?

Hive with Transverse Passages.—J. H. Andre, Lockwood,♀ N. Y., on Aug. 5, 1886, writes:

Bees are beginning to bring in honey from the early buckwheat. If we do not get early frosts hard enough to kill fall flowers, there will be a good chance for the bees to build up in numbers, if not in stores, and those that have plenty of good stores will be apt to winter well. I gave a description of the hive I use, on page 361, and I find there is not room enough to work the frames so wide; they should be 7¼ inches wide outside measure, and instead of cutting the frame-rests in the side of the hive, nail on a strip ⅜ of an inch square where the frames come, endwise to the side of the hive. This will admit of a shorter end-bar being used (5-16 of an inch), which is needed in changing the frames inside ends to outside of the hive. Each end-bar must be short, or the inside end will strike the side of the frame hung in the other space and prevent its being placed close to the cross, which must be done in order to keep the bees from building comb under the cross. After the strips for the frame-rest are securely nailed on where each frame rests, a piece may be sawed out between each frame to give a free passage for the bees at the end of the frames. I shall put in 24 frames in each hive next season, for that will give more room for brood, and the way the frames are arranged will admit of their being spaced closer the year around than any other hive.

Acorn Honey.—C. Theilmann, Theilmanton,○ Minn., on Aug. 4, 1886, writes:

My bees have done fairly so far, though white clover has not yielded very well on account of cold, windy weather nearly all through June. Basswood was almost a failure on account of the frost we had on May 4, when the buds made their appearance. My bees have stored about 3,000 pounds of honey from the acorns which were pierced by an insect, thus causing honey to run out.

Prevention of After-Swarms, etc.—David L. Howe, Woodstock,♀ Vt., asks the following questions:

1. What is the Heddon method of preventing after-swarms? 2. Will honey be augmented by covering the section-boxes in the hive with a mat or something of the kind during the honey-flow? 3. Should the brood-nest be covered with enameled cloth or a mat or some substance that will give ventilation when prepared for winter?

[1. A comprehensive answer to this question is too long for this department, and can be found in the Bee Journal for 1883, page 126, or in *Gleanings* for 1885, page 414, or in Prof. Cook's book, or in mine.

2. No. Use a board cover in summer.

3. Some say "yes" and others say "no," and each class winter their bees and lose them with diarrhea when adopting each plan. I have succeeded and failed both ways.—James Heddon.]

Honey-Dew Observations.—Wm. Willis, Pomona,○ Kans., on Aug. 9, 1886, writes:

I have been an observer of the vexed question of honey-dew for nearly 40 years. If there is no dew, there will be no honey-dew or nectar in flowers. That is the rule here, and honey-dew is not confined to oak or any other kind of tree or plant. In a State or Territory where the most honey-dew is found, the most honey is produced. California is the greatest honey-producing State of the Union, and in parts of California, and near Honey Lake, Utah, the honey-dew hangs in great drops on the sage-bush in such quantities that the wings of the sage-hens become so loaded that they cannot fly. There are no oak trees there, and not many bugs either. Now all agree that bees do not make honey, but gather it, and I think it equally reasonable that plant-lice do not make honey, but subsist on it. If plant-lice do make honey, what do they make it out of? If they make it out of a green acorn they can excel the honey-bee and all the professional chemists combined. It is not improbable that bugs of any sort may gorge their stomachs on honey-dew until it will pass undigested; hence the "bug-juice" so much talked of to the great injury of our honey market.

Paper Comb Foundation.—Chas. F. Henning, Citra,⊙ Fla., on Aug. 4, 1886, says:

So far my bees have done very well. I have taken a little over 207 pounds on an average, per hive, and all are full again. Wax for foundation has been very scarce with me, and I have tried many experiments of which I will speak some other time, but the following in particular I am well pleased with: I take strong but very thin paper, cut it the proper size for brood-frames, dip it into wax twice, run it through the mill, and I have very fine foundation for brood-frames, and foundation that my bees never go by. It is stronger, never sags, and does not take more wax than thin foundation for surplus. I will report later.

Partridge Pea, Reversing Combs, etc.—T. M. Coleman, Glendon,○ Iowa, on Aug. 5, 1886, writes:

I send a plant that grows very plentifully here, and the bees work on it a great deal, but it looks to me as if there could be but little for them in it. I would like to know what it is, and whether it is a good honey-plant. Our bees have done better than I ever knew them to do in May and June, but they have done very little since. I tried reversing a hive by nailing strips of lath across the top of the frames and turning it over just before putting sections on. It was a strong colony, and the frames were full of brood and honey during basswood bloom, yet they did but very little in the sections for about a week. There were brace-combs, and every space filled with honey, crowding the tops of the frames very closely. When turned over, the bees cut these thickened combs away and put it in the sections, and the result is very dark, unsalable honey in the sections; while all the rest is so very white and good. I have concluded that I do not want to reverse frames any more. But I am using over a dozen hives with frames 6 inches deep, outside measure, otherwise Langstroth size, that three seasons of close watching convinces me are better in many respects than any deeper hive. Thanks to Mr. Dadant for his advice to paint cloths for covers for sections; they are just what I wanted. I use yellow ochre and linseed oil on any coarse cloth, coffee sacking, etc. I am decidedly opposed to bevels and rabbets for two-story hives. I think a square joint much the best, and prefer loose top and bottom boards.

[The plant is partridge pea (*Cassia chamæcrista*), and furnishes nectar in abundance. The flowers are very attractive to honey-loving insects, and are visited by such in great numbers. At the base of each compound leaf there is a curiously-stalked, button-shaped gland, which also excretes a sweet fluid, and which attracts the bees.—Ed.]

The Trials of Bee-Keeping.—W. Stearns, Lima,δ Iowa, on July 27, 1886, writes:

We have had a very good flow of honey from both white clover and basswood, and now from the so-called honey-dew. I am very much of the opinion of J. H. Andre, as stated in his article on page 453, that there is a great deal of hard and hot work about bee-keeping, if one is to be successful. Although I have managed to sell all of my honey up to date, the outlook now is not very encouraging. Honey is a drug in the market, and is sold at ruinous prices. I am fully convinced that honey will never become a staple article of consumption, as very many cannot eat honey, and others do not like it. I have had both rheumatic and malarial fevers, and though I did not at the time attribute my sickness to being stung often, and thus poisoning my blood, yet I am somewhat of that opinion at present.

Building Drone-Comb—Hiving Swarms.—Chas. Mitchell, of Molesworth, Ont., writes:

I cannot tell how I made such a statement as Mr. Hutchinson alludes to on page 437; if correctly printed it is too sweeping. What does any one suppose I do with my supers in use before the bees swarm? I am not so far behind the times as to let my bees lose time building drone-comb in 6 empty frames, and my supers in the house for a week. Many of my first swarms had to get two comb honey supers to let them inside at the time of swarming. Next came the trouble of swarming out from such pent up colonies. I had more trouble with swarming out than I have had in 6 years, until I gave them more room below, when all went well. Those are the colonies I meant, that got no supers until they needed them. I had several colonies finish 120 pounds of comb honey which came off before July 10, and every drop was clover honey. That does not look like idle supers. How many colonies had Mr. H. that equalled this, in either the reversible hive or the other? I certainly know that Mr. Hutchinson is not stingy with his bees, if he thinks he will get it back, as I think he has changed his hives twice in about 3 years, which means expense. I cannot conceive how his system destroys all wish and instinct of the bees to build any more drone comb. However, I will try it once more, and will be very ready to give the author full credit. In six years of close observation, only once have the bees, that hatched after the first swarm, been of any use to me. We have had two very dry seasons; honey failed altogether about July 10. I have many colonies that were given foundation, that have about honey enough to winter on, and those that had to build their combs are starving. This has happened for 3 years. It is pretty hard to have to turn round and buy sugar for 100 colonies run on 6 frames all summer; this thing is fast putting down the price of honey, and making millionnaires of our sugar merchants.

Honey-Dew for Winter Stores.—P. Lattner, Worthington,⊶ Iowa, on Aug. 6, 1886, writes:

Bees have done well here. I started with 50 colonies, extracted 11,500 pounds of good white clover honey, and have 100 pounds of comb honey. On July 17 the bees brought in honey-dew which spoiled the balance in the hives. The hives are now full of that kind of stuff. Will it do to winter bees on? It is so dry now that I fear we will have no fall crop, unless rains should come soon. The stuff gathered is of a dark green color, very thick and sticky, and tastes as though oak leaves had been stewed in molasses.

[Those who take the risk of wintering bees on honey-dew, take a very heavy one.—Ed.]

Phenol for Foul Brood.—A subscriber in Michigan gives the following experience with it:

I notice on page 491 a request to know if any one has been successful in treating foul brood by the Cheshire method. I will say that I have cured foul brood with phenol, and did not take the pains to follow the treatment as laid down by Mr. Cheshire. In 1884 I received a large number of colonies of bees from the South. Late in September I found that they were affected with foul brood. As it was late in the season nothing was done, and several colonies were lost. The next season it again made its appearance; the stores were extracted at once, and the bees were fed a syrup made of honey and water, which was boiled and skimmed, and about one-fourth tea-spoonful of the absolute phenol added to the syrup, which was 5 quarts. The mixture was then put into the combs, the cells being filled; the brood also being covered and some spilled on the bees. As I had some quite bad, and did not have much faith in curing them, I experimented some with thus feeding the medicated syrup quite strong, but it did not seem to injure the bees any, and did not kill any as I expected it would. I regard this as a sure cure, as the disease has not made its appearance since the treatment, and the affected colonies did better at once after being thus treated.

Some Honey-Dew, Marketing, etc.—2—J. H. Larrabee, (16—33), Larrabee's Point,⊷ Vt., writes:

I think that I have a case of honey-dew, even in the old "Green Mountain State." An elm-tree situated in the centre of the pasture near the house, I found the other morning to be swarming with bees, and upon obtaining some of the leaves they were found to have small, sticky, shiny and sweet spots on their upper surface, and from 3 to 6 small green aphidæ on the under surface of each leaf. My bees have had an average season, but are doing nothing now but draw from their winter stores. I have a colony which, on June 15, sent out a first swarm, that lost its queen and returned to the old hive. I supposed, of course, that the young queen would come around all right, but upon examining them about July 20, I found them queenless, with no brood or eggs in the hive, showing that they had had no laying queen since swarming. I am unable to find laying-worker signs. I introduced a virgin queen which they would not accept. I have removed three frames replacing them with frames of brood, and will introduce a queen. I wish that some able apicultural writer would give us a good, practical article in the Bee Journal on "Relative market values, city and country." Ignorance and carelessness as to cost of production, etc., are responsible for much of the low prices. We need much more light on markets, not marketing honey.

Convention Notices.

☞ The next meeting of the Stark County Bee-Keepers' Society will be held in Grange Hall, at Canton, O., on Aug. 31, 1886. M. Thomson, *Sec.*

☞ The N. W. Ills. & S. W. Wis. Bee-Keepers' Association will hold its next meeting at the residence of F. D. McKibben, 1½ miles east of Dakota, on the Milwaukee & St. Paul R. R., on Sept. 6, 1886.
Jonathan Stewart, *Sec.*

☞ The Cedar Valley Bee-Keepers' Association will hold its annual meeting at the office of Jerry Mosher, East Side Waterloo, Iowa, on Aug. 18 and 19, 1888. An exceedingly good programme has been arranged. All interested in apiculture are most cordially invited to attend.
H. E. Hubbard, *Sec.*

☞ The 4th annual basket picnic of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Schuetzen Park, Iowa, on Thursday, Aug. 26, 1886. All interested in bee-culture are eernestly requested to be present and make this the grandest picnic in the history of the Organization.—I. V. McCagg, Wm. Gronroll, and Wm. Goos, Committee of Arrangements, Davenport, Iowa.

☞ The Iowa State Bee-Keepers' Association will meet on the Fair Grounds in Des Moines, on Tuesday, Sept. 7, 1886, at 2 p.m., continuing in session during that and the following two or three days. A large and substantial tent has been secured and is now at hand for the use of the society. Any or all of the 6,000 bee-keepers of Iowa are urgently requested to be present and help make the meeting a pleasant and profitable one.
A. J. Norris, *Sec.*
O. O. Poppleton, *Pres.*

AMERICAN
Established in 1861
Oldest Bee Paper in America
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

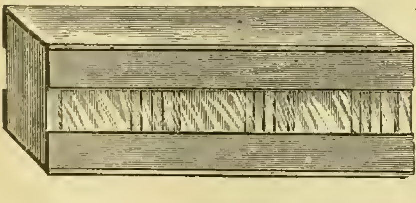
To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¼c. per light, extra.



◆

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at **$6.00** each.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Italian Queens.—We have a few untested queens which we can send by return mail. Three for $2.75; six for $5.00; twelve for $9.00. For Tested, double the prices.

System and Success.

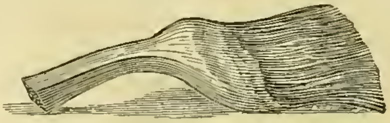
☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable.



When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides their own, with $3, for one year, we will present a copy of this valuable book.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 7 a. m., Aug. 16, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Prices are nominal. Offers of 12@13c. would be accepted; yet 14c. is being asked.

BEESWAX.—Scarce at 25c.

R. A. BURNETT. 161 South Water St.

NEW YORK.

HONEY.—The present quotations are as follows: Fancy white comb in 1-lb. sections, 10@12c.; fancy white comb in 2-lb. sections, 8@10c; buckwheat in 1 and 2-lb. sections, 5@8c; extracted white clover, 6c; extracted, California, 4½@5c; extracted, Southern, per gallon, 45 to 55c.

BEESWAX.—23 to 28c.

McCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—The market is little dull, fruit interfereing with the demand. Best comb honey in 1-lb. sections, 13c.

BEESWAX.—Firm at 23c. for fair quality.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is slow for all kinds and shapes of honey. Prices of extracted honey range between 3½@7c., according to quality; and choice comb honey brings 14@15c. in a jobbing way.

BEESWAX.—Demand is good and arrivals fair. We pay 20c. for good yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The demand for honey is not very lively at present, but prices are steady. Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The receipts of new comb honey are fair, with a good demand, and light stock in the city. Extracted is in light demand. We quote: ½-lb. sections, 16c.; white clover, 1-lb. 13@14c.; dark, 1-lb., 10@12c.; white clover, 2-lbs., 11@12c.; dark, 2-lbs., 9@10c.; white sage California, 2-lbs., 10@11c.; dark, 2-lbs., 8@9c.; extracted white clover, 5@6c.; dark, 3@4c.; white sage California, 4@5c.; dark, 3½@4c.

BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is fairly supplied with honey, trade is dull, prices depressed, and the outlook is for a large production. Already some is being peddled about the city by the producers themselves, demoralizing the prices, which should not be done. We quote: Choice white in 1-pound sections, 14@15c.; 2-lbs. 13@15c. Dark honey not wanted. Extracted, white, in barrels and kegs, 5@7c.; in tin cans, 6@8c.; dark in barrels or kegs, 4@6.

BEESWAX.—25c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—Arrivals of honey have been smaller in the last week, as the prices are so low that producers or owners cannot afford to sell without a loss to them, and they prefer, therefore, to store their honey either here or in the country for better prices. The crop has been represented much larger than it really is; and prices are improving a little, or are at least a little firmer. Some large sales at 3¼ to 4c. for choicest quality for export have been made. We quote 3½ to 4¼—the latter for choicest quality in a jobbing way. Supplies are very small, but soon they may increase, and quality promises to be choice.

BEESWAX.—According to quality, 20@23c.

SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Prices are so low that honey-producers are holding back their product; still the market is well supplied. We quote: Comb, extra white, 8½@10c.; off grades, 6½@7½c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.; dark, 3c.

BEESWAX.—22½@23c.

O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Firm at 22c. for prime.

D. G. TUTT & CO., Commercial St.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices :

Single copy, 5 cts. ; per doz., **40** cts. ; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

* * *

Frank Leslie's Sunday Magazine for September opens with a second installment of Mr. Powell's interesting "Leaves from My Life," with portraits of Robert Southey, Wm. Wordsworth, S. T. Coleridge, Leigh Hunt and Miss Landon. A very interesting article is, "Why do Church-bells Annoy ?" by S. Austen Pearce, Mus. Doc. Oxon, which is illustrated by no less than 14 cuts. This is appropriately followed by Bulwer's translation of Schiller's "The Lay of the Bell," with three illustrations. There are numerous articles, poems and midsummer illustrations, making up a bright and interesting number of this favorite family magazine.

* * *

We are in receipt of a large and very carefully executed engraving of the new Standard Oil Company Building, 26 Broadway, New York, which is noteworthy as the finest business structure on the greatest commercial thoroughfare of this continent. The enormous granite pile, 200 feet deep, and almost 200 feet in height from foundation stone to pinnacle, is entirely given up to the executive offices of the Company, which is entitled to credit for having added so imposing and enduring an example to the great commercial monuments of the Metropolis.

* * *

☞ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.
E. T. ABBOTT, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

Advertisements.

WILL sell 400 full Colonies of Bees in lots to suit buyer ; or will sell Apiaries already stocked up. **Now is your time.**
Address, **H. R. BOARDMAN,**
28Atf EA. TOWNSEND, Huron Co., O.

ATTENTION, BEE-KEEPERS ! !

NOW is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates : 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
32Atf COLERAINE, MASS.

HOW to WINTER BEES.

THE October number of the **American Apiculturist** will contain essays on "**Wintering Bees,**" from the pens of **James Heddon, G. M. Doolittle, A. E. Manum, Prof. Cook, Dr. Tinker, J. E. Pond, Ira Barber, J. H. Martin,** and other equally prominent apiarists. Every bee-keeper should secure a copy. For ten cents in stamps this number will be mailed to any address on September 25. No specimen copies of this number will be sent out.

Regular subscription price $1.00 per year. Single copies 10 cts. each. Copies of back numbers will be sent free. Address,
AMERICAN APICULTURIST,
33A6t WENHAM, MASS.

HUMPHREYS'
HOMEOPATHIC
SPECIFIC No. 28
In use 30 years. The only successful remedy for
Nervous Debility, Vital Weakness,
and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5.
SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.

I CAN use a few thousand pounds of Extracted Honey of good quality, if cheap. Address,
H. R. BOARDMAN,
28Atf EA. TOWNSEND, Huron co., O.

BEE Hives and Sections —Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

TESTED Queens, (Imported Mother), $1.25 each ; $12 per doz.-O. N. Baldwin, Clarksville, Mo. 4A1y

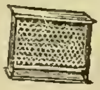
ROOT'S Simplicity and CHAFF HIVES, Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand, Shipping-Crates, all sizes, single and double tier. **E. R. NEWCOMB,**
PLEASANT VALLEY, Dutchess Co., N. Y.
27A8t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Golden Italians.

WARRANTED Queens 75 cts. each ; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,
JAMES WOOD, North Prescott, Mass.
20A20t

FLAT-BOTTOM
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.
THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

THE AMERICAN APICULTURIST

SENT one year, and a **Tested Italian Queen,** to each subscriber—all for $1.50. Sample copies free. Address,
30Atf **HENRY ALLEY, Wenham, Mass.**

Vandervort Comb Fdn. Mills,
Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

LOOK HERE!
Italian Queens by Return Mail.
Tested, **$1.00 ;** Untested, **75 cts.**
W. G. HAYEN,
33A1t PLEASANT MOUND, ILL.

FREE! New Book of Fancy Works with **100** Illustrations, **150** New Stitches, **10** Special Offers. **200** Picture Bulletin 48-col. story-paper, all for **4c** postage
National Bazar, 7 W Broadway, N. Y.
33A13t

STRONG Nuclei—with Tested Italian Queens and full-sized frames. 2 3-frame Nuclei, $5.00; 10 3-frame Nuclei, $23.; 2 4-frame, $6.; 10 4-frame, $25.00. Also Full Colonies cheap. Address,
31D2t REV. J. E. KEARNS, Morning Sun, Iowa.

Send 75 Cents for my New Book—"A Year among the Bees ;" 114 pages, cloth bound. Address,
DR. C. C. MILLER,
20Atf MARENGO, ILLS.

Alley's Queens by Return Mail.
Warranted, $1.; Select, $1.25 ; Tested, $1.50

TESTIMONIALS :

Monticello, Wis., Aug. 8, 1886.—The Queens I got of you last season are splendid,—the best in my yard.—F. J. Breylinger.

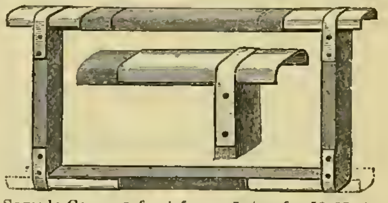
Lafayette, Ind., Aug. 9, 1886.—Please send me 2 Queens. I want your stock, as it is the best I have ever had.—James L. Cohee.

Somerset, O., July 23, 1888.—I have an Italian Queen (crossed with a Syrian drone) that I got of you 2 years ago, that produces my best honey-gatherers, and very gentle too.—R. B. Woodward.

Address, **H. ALLEY,** Wenham, Mass.
33A1t

Metal Reversible Frame Corners.

ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.



Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. **F. M. JOHNSON,**
WASHINGTON DEPOT, Litchfield Co., CONN.
32Atf

HONEY and BEES for SALE.

5,000 **POUNDS OF HONEY,** White Clover and Basswood, in 1-pound Sections. Also, **100 COLONIES of Bees** in good hives ; good straight combs, strong with bees and heavy with honey—at **$6.00** per Colony. **WILLIAM BLAKE,**
32A3t BUCHANAN, Berrien Co., MICH.

WANTED!
500,000 Names.

EVERY Poultry, Bee or Pet Stock Breeder subscribing for "THE POULTER" during the next 90 days—and sending us a list of not less than twenty-five (25) *bona fide* names and addresses of persons who are or may be interested in POULTRY (so that we may send them Sample Copies)—will have his or her name inserted in our "Breeder's Directory," FREE OF CHARGE.

To the Breeder sending the largest list of names will be presented a *one inch advertisement* in "THE POULTER," for Six Months ; to the second largest list, for Four Months ; to the third largest list, for Two Months ; and to the fourth largest list, for One Month, *free of charge.*

This gives *every* breeder (who subscribes) a *Free "ad" in our Breeder's Column.* "THE POULTER" one year *and a chance for a one inch "ad" free*—ALL FOR **50** CENTS.
Address, **THE POULTER,**
32A3t MT. VERNON, OHIO.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

CONDENSED PRICE-LIST
OF
BEE-KEEPERS' SUPPLIES
FOR SALE BY
Thos. G. Newman & Son,
923 & 925 West Madison Street,
CHICAGO, ILLS.

* * *

Our Illustrated Catalogue (36 pages) sent *free*, upon application.

* * *

HEDDON'S NEW HIVES.

SAMPLE HIVE **$4.00.** This includes the bottom-board and the stand; a slatted honey-board, and a cover; two 6-inch brood-chambers, each containing 8 frames; 2 surplus arrangements, each containing 28 1-lb. sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is nailed and painted, ready for immediate use.

For Hives Ready to Nail, see our Catalogue.

LANGSTROTH HIVES.

BROOD chamber with portico and 7¼ in. cap, 10 frames, nailed, not painted $1.25. Material, in the flat, 90c. each. With movable side, $1.75; in flat, $1.30.

We also make our 7¼-inch caps with a sloping or cottage roof—price 15 cts. nailed and 10 cents flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

LANGSTROTH FRAMES.

MATERIAL (9⅛ x 17⅝ in., outside) per 100, $1.25. Per 1000, $12.

SUPERS for Comb Honey.

STORY (32 1-℔. sections) nailed, 75c. Material, in the flat, 50c.

Story (24 2-℔.) same price as above.

Story (7 wide-frames, with 21 2-℔. sections and separators) nailed, 75c. Material, in the flat, 60c.

Story (7 wide frames, with 56 1-℔. sections and separators) nailed, $1.50. Material, in the flat, $1.05.

Comb-Honey Rack (18 2-℔. sections, separators and glass) nailed $1, flat 50c. Rack without sections, &c. 35c. flat 15c. Rack material, in the flat, by mail, 75c.

HIVE CLAMPS.

FOR securing loose bottom-boards, VanDeusen's, sample set, by mail 15c One or more, by express, 10c. each.

Ackerman's—Sample set, by mail 20c. One or more, by express, 15c. each.

SECTIONS for Comb Honey.

ONE-PIECE (Forncrook).—Of these we keep in stock the 4¼x4¼ in. size holding 1 ℔. and 5¼x6¼ inches, holding 2℔., a trifle *less* than 2-inches wide, with narrow or wide tops; also, both sizes 1¾ inches wide, with narrow tops.

	4¼x4¼	5¼x6¼
1,000 Sections	$4.00	$4.50
500 "	2.25	2.50
250 "	1.25	1.50
100 "	60	70

Odd sizes, 5x6 or less, (not less than 500 made) $3 for 500; $5.50 per 1,000.

DOVETAILED, four-pieces, 5¼x6¼, wide or narrow tops, and 4¼x4¼ with narrow tops only, (all *scant* 2 in. wide). Prices same as the above

PRIZE—to be nailed—are of 2-lb. size only. Prices same as the above.

HONEY CARRIAGE,

REVOLVING Comb Hanger, Tool Box and Recording Desk, combined. Price, complete, $18.00.

BARNES' SAWS.

A COMPLETE illustrated catalogue and price-list of these machines will be mailed free, upon application.

ATOMIZER.

TO change the scent of bees when introducing Queens, uniting or dividing colonies, making nuclei, etc. Price, 75c. Mailed for 10c. extra.

SWARM CATCHER.

BAILEY'S swarm catcher consists of a frame-work, made of wood and covered with wire-cloth, which can be set at any angle. By its use, with a queen cage, a swarm can be compelled to stay in any hive, until the swarming-fever is over. Price $3.80.

COMB FOUNDATION.

WE keep three sizes in stock, viz: 12x18, 8x16½, and 10x11 inches. Special sizes, in a week, at same prices, which may be changed without notice.

1 lb., by mail, (small sheets)	65c.
10 " or less, by express, ℔ lb.,	40c.
25 " " " "	39c.
50 " " " "	38c.
100 " " " "	37c.

Thin, *for comb honey,* **10**c. ℔ ℔. *extra.*

Extra Thin, (VanDeusen's *flat-bottomed* or Vandervort's) **20**c. ℔ ℔. *extra.*

Wired, (8x16½ or 10x11 in.) 1 to 25 pounds 60c. ℔ ℔.; 25 to 100 lbs. 58c. ℔ ℔.

COMB FOUNDATION MILLS.

WE can furnish any of the Comb Foundation Machines, or the Given press, at manufacturers' prices.

FOUNDATION CUTTER.

Small size (tin wheel)	10c
Large size (steel wheel)	75c

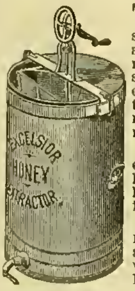
When wanted by mail, add 2 cents to the former, and 5c. to the latter price.

SHIPPING CRATES.

MATERIAL for 50 crates (to hold 12 2-℔. sections) no glass. $4.75. A sample nailed, with sections, 50c.

Material for 50 crates (to hold 24 1 ℔. sections) no glass, $6.00. Sample, 60c.

HONEY EXTRACTORS.



THE **$8** and **$10** sizes are made to suit those who desire a cheap but practical machine. The cans are smaller, the sides of the baskets are stationary, and they have no covers, strainers, or metal standards.

Being made entirely of metal, they are very light and durable, and have lugs for firmly fastening to the floor.

Those who want the BEST honey extractor are referred to those who are now using the Excelsior.

For 2 frames,	13x13	inches	$ 8 00
For 2 "	10x18	"	8 00
For 3 "	10x18	"	10 00
For 4 "	10x18	"	14 00
For 2 "	13x20	"	12 00
For 3 "	13x20	"	12 00
For 4 "	13x20	"	16 00

The 3-frame basket is in a can of the same size and style as the 2-frame. The 4-frame basket is in the larger can; the latter 4 have metal standards for the basket to revolve upon leaving room underneath the basket for 50 or 80 pounds of honey.

EXCELSIOR Wax Extractor.

WE make two sizes, the smaller one having a larger capacity than the Swiss Wax Extractor. Prices, small size, **$4**; large size, **$5.00**. Some of the advantages of this Extractor are:

1. It is more easily operated, there being no necessity for removing the top to re-fill with water.
2. It melts the wax quicker, because it is brought into a more direct contact with the steam.
3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.
4. The filler for water acts also as an indicator, showing the amount of water in the boiler; when the steam escapes through the filler, more water is required. Keep a kettle of hot water ready to re-fill when required.

PURE PHENOL.

FOR the cure of **Foul Brood,** used by Mr. Cheshire, of London, England. As it is a liquid, it can be sent only by express. Price, 25c. per oz.

TIN POINTS, for Glassing Sections

SQUARE or **V**-shaped, 1,000, by mail, 50c. By express or freight, 40c.

SHUCK'S BEE-FEEDER.

FOR feeding bees at the entrance of the hive, any time; it feeds much or little, as may be desired; feed can be reached only by the bees from the inside of the hive. Price, by mail, 30c. By express, 25c. each, or $2.40 per doz.

PERFORATED-ZINC.

DRONE and Queen Excluders.—We carry in stock two sizes: 19¾x14½ inches, for Langstroth hives—price 25 cents each; also in sheets 3x8 feet—24 sq. ft.—price, $2.75 per sheet. We will cut pieces at 15 cents per sq. ft.

HONEY KEGS.

THESE Kegs are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap, and often cheaper. They need no waxing, but should be well scalded with boiling water before used. Do not soak them. Prices:

5 gallon, to hold	50 lbs.	40c
10 " "	100 lbs.	60c
17 " "	175 lbs.	80c

A discount of 10 per cent. on 25, or more; 12½ per cent. on 50, or more; and 15 per cent. on 100, or more, kegs.

LABELS FOR PAILS.

THESE labels are of two sizes, printed on colored paper; they are very attractive, and add greatly to the appearance of the pail when filled and offered for sale. Either size, printed with name and address, at the following prices—(not less than 100 printed):

	Small.	Large.
100	$1 00	$1 00
250	2 00	2 25
500	3 00	3 50
1,000	4 00	5 00

TIN PAILS FOR HONEY.

THE Straight Pails of all sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Samples of the 4 sizes, put inside of one another as a nest, price, 50 cts. by express. Prices:

		Per doz.	Per 100
Gallon, holding	10 lbs.	$1 80	$12 00
½ Gallon, "	5 "	1 50	9 00
Quart, "	2½ "	1 20	7 00
Pint, "	1¼ "	65	4 00

THE Tapering Pails of all sizes have a bail, and on the 25-pound pail a wooden handle is added. These tapering pails are made heavier and stronger than those with the straight sides—the covers are deeper and the top edge of the pail is doubled over, making it smooth and convenient to handle.

Samples of the **five** sizes, nested, 75 cents, by express, or the four smaller sizes, 50 cts. Prices:

To hold	1 ℔.	4 lbs.	7 lbs.	13 lbs.	25 lbs
Per doz.	.75	$1,25	$1.50	$2.00	$3.25
Per 100,	5.00	8 00	10 00	14 50	23 00

GLASS HONEY JARS.

THESE Jars, at the following prices, will be shipped from Cincinnati, O.

1 lb., common glass, per gross	$ 5 00
2 lb., " " " "	6 50
1 lb., flint glass, per gross	6 00
2 lb., " " " "	7 50
Corks for same, per gross	75
Tin Foil Caps for same, per gross	80
Labels for same, per gross	75

LONG RUBBER GLOVES.

FOR SIZE, lay the open hand, palm down, on a sheet of paper, and mark the outline of hand and fingers with a pencil. Price, by mail, $1.75.

WOODEN PAILS for HONEY.

WOODEN water pails, well-painted outside, with 3 iron hoops and a tight-fitting wood cover, at $2.25 per dozen. They will hold 25 lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

HONEY KNIVES.

IN using Bingham & Hetherington's Honey Knives only the thin, sharp, beveled edge rests on the combs, and the caps, after being cut off, slide up in large sheets and roll over on the knife, like shavings on a plane. They are 2-in. wide, tempered and finished like a razor, and will last a life-time.

Price, $1. By mail, $1.15.

Muth's Honey Knife, 50c.; by mail 65c.

BEES AND QUEENS.

FULL Colonies of Italian Bees, in Langstroth hives, bred to highest standard of excellence for all the best points, $8.00. Tested Queens, $2.00.

WIRING TOOL

FOR pressing foundation into wired frames—15 cents; by mail, 20 cts.

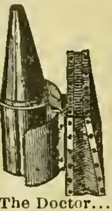
WIRE NAILS.

FOR nailing Sections, Cases, Frames, Racks, Crates, etc. The entire length of the nail being the same thickness, they do not loosen as ordinary iron nails will, and are not as liable to bend or break.

⅜	inch long, wire No.	20,	per lb.	22c
½	" "	19,	"	17c
⅝	" "	18,	"	14c
¾	" "	18,	"	13c
⅞	" "	17,	"	11c
1	" "	17,	"	11c
1¼	" "	16,	"	10c
1½	" "	16,	"	10c
2	" "	15,	"	9c

If wanted by mail, add 18 cts. per lb. for postage. We can furnish larger nails, up to 5-in. long, when desired.

BINGHAM SMOKERS.



THIS is the first and only bellows Smoker ever made which would burn stove-wood. It burns any thing combustible, and needs no care except to be re-filled once in one or two hours. It works easily and will throw a stream of smoke ten feet. It will not go out nor wear out. It will save time stings and money.

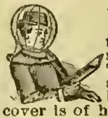
The Doctor	3½ inch,	$2 00
The Conqueror	3 "	1 75
Large, wide shield	2½ "	1 50
Extra Stand, wide shield	2 "	1 25
Plain Standard, nar. sh.	2 "	1 00
Little Wonder, wide sh.	1¾ "	65

Wholesale Rates, on application.

SEEDS for HONEY PLANTS.

White Clover—per bushel (60 ℔s)	$15 00
" " per peck. (15 lbs)	4 00
" " per pound	30
Melilot Clover—per bushel	$10 00
" " per peck	2 75
" " per pound	20
Alsike Clover—per bushel	$12 00
" " per peck	3 25
" " per pound	25
Bokhara Clover, imported, per lb	50
Mignonette—per oz., 20c.—per lb	2 00
Catnip—per oz., 10c.—per lb.	1 00
Motherwort—per oz., 10c.—per lb	1 00
Spider Plant—per oz, 20c.—per lb	2 00
Cleome—Rocky Mountain Bee-Plant—per oz., 15c.—per lb.	1 25
Figwort—or the Simpson Honey Plant—per oz., 20c.—per lb.	2 00

NEW BEE VEIL.



HAS 5 cross bars *riveted* through the center at the top. These button to studs on the neck-band. The bars are light spring steel; the neck-band is of hard spring *brass*; and the cover is of handsome light material. It is very easily put together—no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. It protects against mosquitoes, flies, bees, gnats, etc. The Veil weighs only 5 oz. Price $1.00.

GUMMED HONEY LABELS.

OF these we have 20 styles, and when ordered in quantities of 250, 500 or 1,000, we print the name and address of the apiarist. Prices range from 25 cents for 250, and upwards. Samples sent upon application.

MISCELLANEOUS.

Little Detective Scales, weigh 25 ℔ $2.50

Honey Gates for Extractors, 75c.

Gearing for Honey Extractors, $1.50.

Handles for Honey Gates, 25c; mail 40c

Novice's Metal Corners, per 100, 50c.

Wire Cloth, painted, 14 mesh, 8c. sq. ft.
" tinned, for Qu. cages, 12c. "
" " for extractors, 15c. "

Glass, 5x6 in., 240 lights in a box, $2.50.
Glass for shipping crates, per 100 lights
2¾x13½, for one-℔. sections, $2.50.
3⅜x16½, for two-℔. sections, $3.50

Whitman's Fountain Pump, $8.

Wire (for fdn.) oz. spools, 4c.; mail 6c
" " 1 ℔. spools, 40c.; mail 58c

Novice's Iron Blocks, for making his metal-corner frames, 15c; mail 25c

Queen Registering Cards, 10c. per doz.

Scissors, for cutting queen's wing, 50c

Ribbon Badges, 10c.; 100 for $8.00.
" rosette and gold lace, 50c

Rubber Sprinkler, $1.00; by mail, $1.10

Parker's Foundation Fastener, 25 cts. by mail, 40 cents.

Bee Veil (common), by mail, 50 cents.

Metal Rabbets, per foot, 1½c.

Registering Slates, 50 for $150;—100 for $2.50. Sample, by mail, 10c.

Felt Blankets, 35c. per lb. by express.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Aug. 25, 1886. No. 34.

Prosper, and all men will love you ;
Pawn, and they turn and flee ;
They're after your money, *as a bee is for honey,*
As you may surely see.

* * *

The Colonial Exhibition is to be held in London, England, next month, and many prominent Canadian apiarists have started across the ocean to attend and exhibit Canadian products.

* * *

The Northwestern Convention, usually meeting during the Exposition at Chicago, will this year unite in convention with the National at Indianapolis, Oct. 12–14, 1886. The reasons are given in full by the Secretary, on page 539. Let there be a general rally.

* * *

Catnip is one of the most valuable plants for bees. The flowers are rich in honey, and for several months, commencing with June of each year, yield it freely at all hours and in every kind of weather. A patch may easily be raised from the seed, sown the latter part of summer or early in the spring.—*Indiana Farmer.*

* * *

The Rev. W. F. Clarke intended to have gone on the annual excursion of the Canadian Press Association, which elected him an honorary member on the 5th inst., but this is what he says : "A bad attack of sciatica compelled me to forego the pleasure of joining the excursion." He intends to be at the National Convention at Indianapolis in Oct. 12–14, 1886. We are sorry to hear of his illness.

* * *

XXXI Wander-Versamlung. — The thirty-first annual Convention and Bee and Honey Show of the Austro-German Bee-Keepers' Society will be held next Monday, Aug. 30, and continue through the whole week at Troppan, in Silesia, Austria. This is the oldest bee-keepers' society, and the largest and most important one in Europe.

New Postal Regulations, concerning the transmission of "bees," "honey," etc. in the United States mails, were issued on July 17, 1886, by the Postmaster General, under the title of "Order No. 143."

This is the section which relates to **bees ;**

8. *Queen bees and their attendant bees,* and dried insects, may be sent in the mails when properly put up so as not to injure the persons of those handling the mails, nor soil the mail-bags or their contents.

This governs the mailing of **honey-knives:**

5. In the case of sharp-pointed instruments, the points must be capped or encased so that they may not by any means be liable to cut through their inclosure ; and where they have blades, such blades must be bound with wire so that they shall remain firmly attached to each other, and within their handles or sockets. Needles must be inclosed in metal or wooden cases so that they cannot by any means prick through or pass out of their inclosures.

This section admits **honey,** when properly prepared for the mails :

4. Admissible liquids and oils (not exceeding 4 ounces liquid measure), pastes, salves, or articles easily liquefiable, must conform to the following conditions : When in glass bottles or vials, such bottles or vials must be strong enough to stand the shock of handling in the mails, and must be enclosed in a wooden or papier-mache block or tube not less than 3-16 of an inch thick in the thinnest part, strong enough to support the weight of mails piled in bags and resist rough handling, and there must be provided between the bottle and its wooden case, a cushion of cork-crumbs, cotton, felt, asbestos, or some other absorbent, sufficient to protect the glass from shock in handling ; the block or tube to be closed by a tightly fitting screw-lid of wood or metal, with a rubber or other pad so adjusted as to make the block or tube water-tight, and to prevent the leakage of the contents in case of breaking of the glass. When inclosed in a tin cylinder, metal case, or tube, such cylinder, case, or tube should have a screw-lid with a rubber or cork cushion inside, in order to make the same water-tight, and should be securely fastened in a wooden or papier-mache block (open only at one end), and not less in thickness and strength than above described. Manufacturers or dealers, intending to transmit articles or samples in considerable quantities, should submit a sample package, showing their mode of packing, to the postmaster at the mailing office, who will see that the conditions of this section are carefully observed.

Here are the instructions to postmasters concerning these regulations :

224. Postmasters will exercise great care respecting the admission of articles of the fourth class to the mails. Whenever articles are offered for mailing, under the provisions of the two preceding sections, postmasters must carefully examine them and not admit them, if the prescribed conditions of their admission have not been fully complied with. In case of doubt the matter should be referred to the General Superintendent of Railway Mail Service.

* * *

Mr. S. Corneil has been experimenting to test the correctness of Sir William Thompson's table of thermal conductivities given in the "Encyclopædia Britannica," ninth edition. According to that table, wood conducts heat nearly five times as fast as does carded wool. Mr. Corneil finds that this is correct, and has therefore science on his side in the use of quilts lined with carded wool for covering up his bees during the winter. One season's use of these quilts has convinced us that they are the best top packing for bees that we have ever tried, and we shall have more to say on the subject as the season for making winter preparations approaches.—*Rural Canadian.*

The Honey Season in Great Britain is thus described by a Lanarkshire Bee-keeper in the *London Journal of Horticulture* for Aug. 5, 1886 :

> The weather up until July 26, was very changeable. The honey season seldom extends beyond this date, and this year with us it has not yet appeared. There have only been seven days in July that bees stored any surplus, and these days occurred at intervals being all the worse for the secretion of honey. There have been only two consecutive fine days, and the weather is, while I write, gloomy with a low temperature. There are some localities where a fair surplus has been gathered, but with us it is much below the average.
>
> During the height of the clover season, and for three days in succession, the wind blew a perfect hurricane, never before experienced here in July. At least 50 per cent. of my colonies have sent off swarms, which not only gave me extra labor, but taxed my ingenuity to make the most of them.

* * *

Among the Curiosities of Invention recently advertised is a bee-smoker that uses no fire. The substitute for smoke is a mixture of carbolic acid, oil of tar and water, properly proportioned. A bottle of the mixture, enough to last two seasons, is advertised in the *British Bee Journal* for the small sum of sixpence. The recipe does not appear to be for sale. In the absence of a particular description of the way of using this mixture, we suppose that a sponge is saturated with it. The instrument by which it is applied can be affixed to an ordinary smoker. Among the testimonials of the efficacy of this plan, there is one bearing the distinguished name of Frank Cheshire, who says : "I find by experiment that the most vicious of Eastern bees are utterly beaten at once." So says the *Rural Canadian.*

* * *

Mr. J. Stewart, Secretary of the Northwestern Illinois and Southwestern Wisconsin Society writes us that he made a mistake in the date of the convention called on page 523. It should be Tuesday, Sept. 7, 1886. It is correctly stated on page 539 of this issue of the BEE JOURNAL.

* * *

A Swiss Bee-Keeper Cures Foul Brood by means of thyme. This common herb is dried, put into an ordinary smoker, set alight, and the smoke blown plentifully into the hive by the entrance. After doing this eight evenings, he found the larvæ, which had died from the disease, quite dry, and the new brood in a perfectly healthy condition. He continued the fumigation another eight days, which ended in a complete cure of the disease. So says the *British Bee Journal.*

* * *

When placed under a microscope the sting of a bee presents a polish of dazzling beauty ; but when placed in the end of a man's nose the polish is missing, and the appearance more like that of rat-tail file dipped in vitriol. This is official.—*Lige Brown.*

* * *

The American Agriculturist for September, contains the Fair List for this year. This List has been gathered by special correspondence, and is very complete. In 495 counties no fairs will be held this year.

QUERIES
AND
Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Pollen in the Sections.

Query, No. 295.—How can I keep the pollen out of the sections? My bees are mostly on 10 frames, Gallup size, with honey-boards arranged to break joints with the frames. I also tried putting 2 honey-boards on so they would break joints, but they still put the pollen in. They put some in drone-comb. It is worse in old colonies that have not swarmed, or, in fact, any that are very strong. They do this way only during white clover bloom, which yields a great deal of pollen, and is the main crop for honey here. Surplus is all taken from the top. I have had trouble with this every year, but I believe it is worse this year than others.—Clinton, Ills.

In this locality we are not troubled with pollen in sections.—H. D. CUTTING.

I have only found pollen in one single section. You had better try the queen-excluding honey-board.—A. J. COOK.

I have no trouble in that way, and I do not know that I could suggest a remedy.—G. M. DOOLITTLE.

As I never have trouble of this kind, I cannot account for yours.—JAMES HEDDON.

With a square frame and top storing I should not expect trouble from pollen in sections. I have no trouble even with the new Heddon hive. There may be something in the locality, strain of bees, or management.—W. Z. HUTCHINSON.

There are two causes of pollen going into sections—one of them is a narrow section, the other a small brood-chamber. Narrow sections are filled and sealed up the soonest. Wide sections from 7 to the foot up to 6 to the foot require more time for the honey to cure in them; but if properly *tiered up* there is no loss of honey by using them. Wide sections may be used with a queen-excluder on a small brood-chamber, if it does not contain less than 700 square inches of comb, without pollen going into them; but not so with a narrow 1⅜ section. It seems that the zinc queen-excluder is no hindrance to the carrying above of either honey or pollen.—G. L. TINKER.

I have very little trouble in this direction, but cannot tell why. For some reason there must be a lack of cells in which to store pollen in our brood-chambers. I think some recommend contraction of the brood-chamber. I doubt its success.—C. C. MILLER.

You are certainly mistaken about white clover yielding "a great deal of pollen." Here, white clover yields but little pollen, of a pale green color. I presume that your locality produces an abundance of pollen-bearing flowers, in which case do not adjust the surplus departments of the hive (and thereby get the bees in the habit of storing the pollen above the brood-nest) until the honey-flow has actually commenced.—G. W. DEMAREE.

I would like to know myself. This is one of those vagaries that are constantly happening, and for which there is no special or specific remedy that I know of. If the case was mine I should experiment somewhat and see if I could ascertain the cause.—J. E. POND, JR.

Drone-Comb in Second Story.

Query, No. 296.—Why do bees build drone-comb in sections in the second story and fill them with honey? The colony is strong in numbers, and has filled one tier of sections. They have not swarmed.—Bristol, Minn.

Strong colonies are very apt to build drone-comb, especially during a busy season.—A. J. COOK.

It takes less wax and less time to store honey in drone-comb than worker comb.—C. C MILLER.

When comb is built for honey-storing it is of the drone size.—G. M. DOOLITTLE.

Bees are apt to build more drone-comb in sections when the queen is old.—G. L. TINKER.

Some colonies are disposed to build drone-comb more than others, especially with old queens. If you will use worker foundation you can prevent it.—H. D. CUTTING.

I find that bees are more apt to build drone-comb in sections when honey is rapidly coming in, and also in cases where there is no drone-comb in the brood-chamber. In the first case it is presumable that drone-comb is quickest and easiest constructed for the reception of honey.—J. P. H. BROWN.

Bees prefer to build drone or store comb to store honey in, because they are guided by the strictest laws of economy. It is a matter of economy and convenience with them.—G. W. DEMAREE.

Simply to follow the established rule that they prefer large and deep cells for storage of honey, and will always build and use such for that purpose when they have the opportunity. They will never seal up brood in cells more than 7-16 of an inch deep, and will not store honey in such cells if they can find deeper ones. The above inflexible law is the foundation on which the bee-keeping of the future will be built, as by living up to it, we can cause stores and brood both to be placed where we desire, and without extra trouble or labor.—J. E. POND, JR.

Colonies that have not swarmed are quite apt to build drone-comb. When honey is coming in freely, and the bees must build comb in which to store it, they often build drone-comb in which to store the honey, as they can furnish storage room more rapidly by so doing.—W. Z. HUTCHINSON.

It is their instinct to build drone-comb where full worker foundation does not prevent, especially for store comb. They are almost sure to build drone-comb in the sections, if they have none in the brood-chamber, and breed drones in them, too, if a queen-excluder is not used. If you cannot afford full sheets of foundation all around, cut short in the brood-chamber first.—JAMES HEDDON.

Hybrid Bees.

Query, No. 297.—1. What is the appearance or markings of a cross between Italians and blacks? 2. Can they be known with certainty from pure Italians? 3. What is their value compared with other bees?—J. M. C.

1. They are very indefinite. 2. A whole colony, yes; individual bees, no. They are often very excellent.—A. J. COOK.

They vary in the same hive from three-banded bees, which cannot be distinguished from pure Italians, to two-banded, one-banded, and black. such crosses are good honey-gatherers, and are a decided improvement upon the blacks.—J. P. H. BROWN.

1. Some bees are black; some show one band of yellow, some two, and some three. 2. The three-banded hybrids could not be distinguished by their appearance. 3. As honey-gatherers they equal either variety, but as comb-builders they are a little behind the blacks.—W. Z. HUTCHINSON.

1. A part of the worker-bees show the three yellow bands like the Italians, and a part are black, with an indistinctness of markings on others between the two. 2. Yes. Good Italians all show the three yellow bands. 3. An Italian queen mated with a German drone produces workers of good honey-gathering qualities; but a farther cross toward the blacks tend toward deterioration.—G. M. DOOLITTLE.

1. The question of pure mating of an Italian queen can only be known by her worker progeny. If the queen is pure and purely marked, all her workers will show at least three yellow bands. I have had two queens whose workers showed four yellow bands. If impurely mated some of the workers will be black, some will carry two yellow bands, and some three, and all will be terribly ugly. 2. Yes, by their markings as ex-

plained above. 3. In some cases they are nearly as good honey-gatherers; some say equally so. Their irascible disposition makes them a perfect terror to the majority.—J. E. POND, JR.

1. Part of the workers are marked like pure Italians, part like pure blacks. After the first cross, one and two-banded bees appear. 2. In the cross the workers will not all have three yellow bands as in the pure stock. 3. For producing honey I think I would as soon have a first or second cross as pure stock.—C. C. MILLER.

1. In a straight cross between Italians and black bees, a few of the workers may look like pure Italians, and a good many just like black bees; while the greater number will show intermediate markings. 2. Yes, beyond question. It may be difficult to always detect a mere taint or trace of black blood in Italians. 3. As honey-gatherers the first cross between Italians and blacks compare favorably with the best bees of any race. But subsequent crosses make inferior bees; at least such has been my experience.—G. W. DEMAREE.

1. That depends. Sometimes the workers are nearly all two and three-banded. Again, they vary from three bands to no bands at all. 2. No, sir, I have had hybrid colonies that contained *all* three-banded bees, and no one could tell them from some best pure Italians, did they not know from whence the mother came. 3. They are the best bees I know anything about when rightly crossed.—JAMES HEDDON.

1. Very irregular marking, some being all black, others with one yellow mark, others with two and three marks. 2. Yes, in a full colony. 3. In many cases the hybrids are the best honey-gatherers. Some prefer them to pure blood. As a general thing they are very much crosser.—H. D. CUTTING.

The term hybrid has been limited, as it should be, to crosses between the German or black bees and the yellow races, like the Italians, Syrians and Cyprians. Crosses between the latter races cannot be properly termed hybrids, since very little change in the worker bees of such crosses is apparent. Hybrids have from one to three-banded workers, but often all are marked with only one or only two bands. 3. My experience is that hybrids are inferior as workers to crosses between the yellow races. If there is any "bug juice" to be collected, they are always the first and the last to dabble in it, while the yellow races gather little or none.—G. L. TINKER.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ˋO northwest; O‑ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Honey Season in Iowa.

REV. O. CLUTE.

The spring of 1886 opened early, but not too early. When it came, it came to stay. There was little of cold, windy weather to deplete the hives. Yet there were some losses among bees after they were taken from the cellar. The bright, warm, weather made all bees very active. The strong colonies, not finding enough honey in the fields to employ their energies, pitched upon the weaker ones, and robbed them out. I hear of considerable losses from this robbing-out. But bees in the main wintered well in cellars, and, but for the robbing-out, got through the spring well.

The ground was well-covered with snow all winter. It came in good season in December, and staid by us. The fields were scarcely bare at all. Hence the bee-keepers' best friend, the nectar-flowing white clover, was well wrapped up in a warm snow blanket during the fierce attacks of cold in January and February, when the mercury several times marked 35° below zero. The clover came through all right. As soon as the snow was gone it began creeping everywhere. Helped on by the genial sun and the early and abundant rains it soon covered almost every foot of land that is not under the plow. The meadows and pastures were one wide, beautiful stretch of white flowers. Every roadside had its belt of emerald green. To all the streams it gave a verdant fringe. Over the knolls and hills it spread its soft carpet, more delicate beneath the feet than any luxurious fabric from the famous looms. The warm weather brought on early bloom, and soon all of this part of Iowa was densely covered with those delicate white balls whence the faithful bees bring such wealth of amber honey to the waiting hives. The profusion of bloom was a joy to me.

Better weather for honey-gathering was never known. Happily we did not then know that the bright, warm, still days were the beginning of one of the most bitter drouths that the Great West has ever been afflicted with. Day after day the sun rose in a cloudless sky, and gave to our fertile soil abundant warmth. All day long for weeks and weeks the winds were still. No bee, however laden with its burden of honey, was dashed to earth, never again to take wing, by murderous gusts. The measureless amount of honey-bearing bloom, the long procession of days of peaceful calm, the tropical sun glowing in a cloudless sky made a time, which from the bee-keepers' point of view, could not be surpassed.

The linden in this part of Iowa is found along all the streams. It did not seem to feel the touch of the drouth, though by the time it bloomed, the drouth was upon us in all its fierceness. Probably the roots of the linden go to some depth, and those depths were not then dry. Both clover and linden yielded honey of remarkable thickness and weight. It is about a pound per gallon heavier than in ordinary years. I looked daily to see the clover dry up, but it held out wonderfully. I expected hardly any flow from linden, but it did yield well.

I supposed that the dry weather would surely stop all honey-flow as soon as linden failed, but, strange to say, the honey kept abundant for some time after every flower on the linden was dry. As to where this late honey came from I am not sure, but I think it was from red clover. The red clover fields had a dense growth, which came early to maturity, and was cured for hay. This hay was cut when the drouth had begun to get down to business. The glowing sun beat down upon the clover stubbles, and everything but the deep-rooted clover yielded to its withering touch. The meadows have no after-growth at all, except the clover. The roots of this go down so deep that it was able to get some moisture, and to send up struggling tufts of growth that are but the ghosts of what red clover ought to be, on our soil of luxuriant fatness; and these feeble tufts hastened forward to a somewhat abundant bloom. *But the heads were small.* In order to get the honey from these short corolla-tubes it was not necessary to wait until we can breed the "bee of the future," whose tongue shall have the two or three hundredths of an inch added to its length, of which Prof. Cook so ably writes. The tongues of our active Italians could reach the honey in this second growth of red clover. So even when white clover and linden were gone the bees found for some time enough nectar to add a little each day to their luscious stores.

From these sources, and possibly from others that have escaped my eye, our bees have done well. A neighbor of mine reports 127 pounds of clear, white, extracted honey per colony. Another reports the very large yield of 3,200 pounds from 12 colonies—extracted honey, of course. Those running for comb honey have also done well. In this neighborhood, therefore, we have no reason to complain. Probably in those parts of Iowa, and of other States, where the white clover is not yet abundant, and they depend on fall flowers for their surplus, there will be a short crop, for the grip of the drouth has been terrible, and the fall bloom will probably be very light. Our drouth began the middle of May, and yet there is only a slight let up here—in some quarters there is no let up at all. But, happily, other sections have recently been visited with copious showers.

Here at Iowa City the month of July gave us one-tenth of an inch of rain-fall, when the average here is, for that month, five inches. When it is remembered that for half of May and all of June the rain had been equally light, and that the temperature has been higher than usual, some faint idea can be had of how our country is parched and sizzled. Probably some of our brother bee-keepers, who are getting no honey at all this year, will say that we ought to be satisfied with such a yield as I have reported above. But of course we are not *satisfied!* and, may be, we ought not to be. To be satisfied means rest and stagnation. Progress in all the affairs of life comes from those who are not at ease. To be dissatisfied is the condition essential to future growth.

Iowa City, Iowa, Aug. 17, 1886.

Gleanings.

Bee-Keeping in Cuba.

A. J. KING.

The honey-bee was introduced into Cuba from Spain at a very early period of its history; and being a land of perpetual flowers, with no winter to impede their labor, they soon spread to all parts of the island, and bee-keeping has long since become one of the established industries. There is probably no other country of equal extent on the globe, which has furnished an equal amount of honey and beeswax. The latter has, for more than two centuries, illuminated the churches of both this island and the mother country, besides furnishing the supply needed for other purposes, while the former has found a remunerative market in all civilized countries, chiefly in Germany, England, France, and the United States.

A Cuban bee-hive is very simple, consisting merely of a hollow palm log, or oblong wooden box, 10 to 15 inches in diameter, and 5 to 6 feet in length, open at both ends. These hives are arranged in a horizontal position, 3 or 4 feet high, supported on a frame work of long bamboo poles resting on posts driven into the ground. When these hives are full of honey, the Cuban bee-keeper, after thoroughly smoking the bees, thrusts into one end of the hive, a long sword-shaped knife and cuts the combs loose from the inside walls. He then inserts a long iron rod, flattened at the end, and bent in the form of a right angle, clear into the brood-nest (which generally occupies about 15 inches in length of the centre of the hive), cuts the combs, and pulls them out one by one. He then performs the same operation on the other end of the hive, and so continues until the whole apiary is gone over. The combs are now submitted to pressure, and the wax separated from the honey. Of course, the honey so obtained is not very pure, being mixed with pollen, propolis, dead bees, and the juices of larvæ, all of which tends to cause fermentation; Cuban honey (than which, when pure, there is no finer in the world) has gained an unenviable repulation. Native apiaries, of from 50 to 300 or 400 colonies are frequent, and sometimes as many as 2,000 are kept in a single yard. The season for surplus honey extends from October to April, the height of the flow being from the middle of December to the middle of February; but there is almost always a sufficiency for breeding purposes, and hence the Cuban bee-keeper never resorts to feeding. He "robs" his hives only once or twice during the year, and seems satisfied with an average production of 75 to 100 pounds of honey, and 4 or 5 pounds of beeswax per hive.

Nearly three years ago the writer introduced for the Messrs. J. N. & P. Casanova, 100 colonies of Italians in movable-frame hives, together with all the modern appliances necessary to insure success. They were located about 18 miles southeast of Havana, 8 miles from the ocean, and, we believe, constitutes the first apiary on modern principles ever seen in the island of Cuba; and to the gentlemen referred to belongs the credit or this great change in the systems of bee-keeping, from which promising results will undoubtedly be realized by many of their brethren in the near future.

MODERN BEE-KEEPING VS. THE OLD WAY.

The year following the introduction of these bees, 113 colonies of them gave, in a period of four months, 43,000 pounds of choice honey, being over 380 pounds per hive, or more than four times the amount produced on the old plan. The success of this experiment far exceeded the most sanguine expectations of the Casanova brothers, and, being gentlemen of means, they at once set about and completed one of the best appointed modern apiaries to be found in any country; and for the benefit of the readers I will briefly describe it.

The apiary and buildings cover nearly three acres of ground, in the form of a rectangle, sloping to the southeast with a descent of 10 feet in a hundred. Near the centre of this plot are two sheds, each 200 feet long, extending across the plot in parallel lines, east to west, and about 30 feet apart. Opening out from the northernmost of these sheds are 6 others, extending to the north line of the plot in parallel lines 25 feet apart. At the centre of the south one of the two first mentioned is another shed extending to the south 60 feet, to the extracting room. These sheds are all 9 feet wide, 6 feet high at the eaves, peaked palm-leaf roof about a foot thick. They are high and airy, affording perfect protection from sun and rain, and are always comfortable, even in the hottest weather.

Along both sides of the sheds, just inside of the eave-lines, are the long rows of two-story hives, painted white, 5 feet apart, and, of course, facing outward, so that the flight of the bees in no way interferes with the workmen. The ground, all sloping toward the honey-house, makes the wheeling-in of the loads of well-filled combs comparatively easy. The extractor is a 6-frame reversible, of heavy galvanized iron, and delivers the honey through a large pipe on top of the centre of a broad screen, covering the top of an evaporating-tank holding 8,000 pounds, where the honey is freed from any little pieces of comb, etc., which may have got in by accident. From the concave bottom of this tank an iron pipe extends down the sloping ground 60 feet further, to a broad covered shed where the honey is received directly into the bung-holes of the tierces by merely turning the large faucet on the end of the pipe. Along the lower side of this barreling shed, and coming close up to it, is the roadway, which is enough lower than the floor of the shed to admit of the rolling of the filled tierces into the carts ready for transportation to the depot.

It will thus be seen that, from first to last, there is no dipping or lifting of honey required. We might go on and describe the uncapping arrangement, with their screen bottoms and troughs leading to the evaporating-tank, and many other useful appliances of the large airy extracting room; but our "story" is already drawn out beyond the space we supposed necessary to tell it; so we will close by saying that everything is built substantial, ample, and yet simple, and contrasts strongly with some of the little "cluttered up" arrangements too often seen in our own country.

New York, N. Y.

For the American Bee Journal.

Phenol and Foul Brood.

D. A. DIMITRY.

After noting the editor's approval of the suggestion made by Dr. J. C. Thom, on page 491, in reference to the cure of Bacillus alvei, by the Cheshire method, I thought it would not be amiss to give my experience in the matter.

Last summer I found among 14 colonies that I had purchased, 5 or 6 that were badly affected with the malady, if such it may be termed. The bees were in box-hives. At first I determined to destroy bees, hives and all, and in that way remove all possibility of the disease spreading. Further thought convinced me that this was a cure rather too heroic; and I concluded to transfer the infected colonies immediately to movable frames, with new comb and healthy brood. I followed the plan laid out, and in two or three weeks realized my error, and found the brood in the movable frame hives almost as badly affected as in the box-hives.

I then decided to try Mr. Cheshire's method. I sent for his pamphlet on foul brood, and a quantity of phenol. I may have deviated a little from the rules laid down in the pamphlet, but I will tell exactly what I did.

To 1 tea-spoonful of phenol I measured and added 400 tea-spoonfuls of water, that had previously been boiled; with a pint or two of this mixture I added honey from a healthy colony, in a sufficient quantity to make a thin syrup. I offered it in feeders to the bees; they would not touch it. They seemed to shun and fear it. I added more honey, making a thick syrup; still they would have nothing to do with it. I concluded to add 100 more parts of water. This I did, and made more syrup. I placed this new syrup in clean feeders (entrance feeders) and placed them before the hives of the diseased colonies, just before dark. The next morning I found that it had all been removed and stored. The next day I opened the hives, and after shaking off all the bees, I took the frames and combs to the extracting room and sprinkled the combs well with the mixture, and and rubbed it on the wood work with a soft rag. The frames were replaced in new hives, and the bees shaken in from the old ones.

Last fall I took the honey from these five hives as closely as I could, and then fed them plentifully with the phenolated syrup. Last winter, having been a terrible one on bees and everything else, I found it necessary to feed some of my colonies early in the spring. For this food I made a solution of 1 part phenol to 750 parts water, adding sufficient honey to make a fairly thick syrup. All the bees took it readily.

Instead of burning the old hives, I simply placed them, with the covers and bottom-boards off, in a place where the sun and rain could always strike them. After three weeks or so I gave them a wash inside with powerful phenolated water, say 1 part of phenol to 50 parts of water.

If any one should wish to see my strongest, most profitable, and, in all, the best colonies of my apiary, I think I would show him the 5 colonies that were claimed as victims by the Bacillus alvei last summer. I found 1-400 too strong, and nothing could induce the bees to go near it. With 1-500 I found a cure perfect in every respect, acceptable to the bees, and satisfactory in every way. I found honey taken from a healthy colony much superior to sugar of any kind, with which to make the mixture. The syrup can be lukewarm or cold, as you please, except that which is sprinkled on the brood, which must be warm, to avoid chilling the brood.

I do not think that foul brood does or can enter into the system of the queen, or those bees that escape it; because the queens that were reigning at the time of the trouble, are now turning out good, healthy bees, and they themselves have no superior in appearance. Prof. Cheshire deserves much praise and credit for discovering and giving to the bee-fraternity this great remedy for foul brood.

Morgan City, ♀ La.

For the American Bee Journal.

Winter Depositories for Bees.

F. F. SOULE.

As the time is approaching for the practical consideration of a "Hotel d'Bee" for the winter, perhaps an experience that I had several years since, might throw some light on the yet unsolved problem. The winter of 1878 I resided in Mansonville, Quebec, where Wm. B. Manson (my father-in-law) "kept bees," using the box-hive and shoe boxes of every description and shape. The cellar used for wintering was under his hotel, 100x50 feet, with an L 100x40 ft., and cellar under the entire building; the cellar under the main part was used for storing vegetables, and never froze; in fact it was always warm. On shelves in this part was where bees were stored. In the extreme north end was a large wood furnace, draft being supplied with air from the bottom of the cellar, besides a large opening was made in the bottom of the furnace wall for cold air for heating chamber. A large chimney (unused) extended to the bottom of the cellar, in which were two 8-inch holes left open; directly underneath the bees was a planked drain 10 inches square, with the outer end open several (say 40) rods away.

The L part of the cellar was cold, in which beef, fish, etc., could be kept frozen the entire winter. A partial wall separated this from the main cellar, while in the main cellar vegetables would grow the entire winter.

Now the strange part of the story is this: The bees would be placed on the shelf, say in the last of October or later, and regardless of noise and confusion would remain perfectly quiet the entire long winter, coming out strong and healthy in the spring, showing no signs of diarrhea, or later on, spring dwindling. In the fall of 1878 we put in one colony with the rest, that was weak and entirely without stores. I told my father that we would put them in and feed as an experiment to see if we could bring them through the winter. In that day we knew nothing of feeders, or had we the movable-frame to give them; but I, myself, the entire winter, made a syrup of sugar and water, placed a piece of comb on a plate, turned the cells full of this syrup, raised the hive, rapping on it, and at the same time my wife would hold the light so the rays would shine inside, and those poor bees would come down *en masse* as eager as calves to get their rations.

Now if any should doubt this they can write to Wm. B. Manson, Mansonville, Quebec (who has been a keeper of bees for 10 or 12 years), who witnessed the performance repeatedly. This colony came out all right in the spring, and rapidly built up. I do not recollect of finding but few dead bees during the entire winter, and I now believe that breeding must have taken place some time, as the colony seemed stronger when put on the summer stand than when put in. I will add that all the hive had large openings at the bottom, in fact the bottom-board fitted very loosely all around, owing to warping, etc. Where the bees were kept it was quite dark.

To sum up: 1. A constant circulation of air was going on. 2. The furnace kept the cellar entirely free from dampness, besides it furnished one of the very, very best of floor ventilators. 3. The open work of the L part admitted an abundant and constant supply of pure, fresh air, and as the furnace was in the north end, and the bees in the extreme south of the cellar, the cold air would naturally be drawn to the furnace first, and pass around so that when the bees received it, all dampness and chill was removed. Bees have been kept in this same cellar, and under the same circumstances, for a number of years (say 12). What do bee-keepers think about it?

Charles City, ♂ Iowa.

For the American Bee Journal.

Fall Work in the Apiary.

W. H. STEWART.

In an article published in the BEE JOURNAL for Sept. 23, 1885, I stated that at the middle of the basswood honey flow I started the building of several queen-cells. We will now suppose that it is eight days later, and that the supers and surplus combs are all cared for.

If I wish to increase my stock of bees, I divide the strongest colonies, giving each hive about equal portions of bees, combs, brood and stores that was contained in the old hive; each hive is now half full of combs; fill each hive with brood-combs, and move the original hive 18 inches to the right, and the new one 18 inches to the left of the centre of the old stand. They are now 3 feet apart, and both facing in the same direction, and looking as near like the old home as possible, and the old stand vacant between them. Do this work late in the afternoon. In the morning the bees will work at both stands about alike.

I pay no attention as to which colony has the old queen with them, but open them two days after and find queen-cells started in the queenless one. I then take a queen-cell from my stock of queen-cells that are now nearly ready to hatch, and place it between the top-bars of the brood-combs of the newly made queenless colony. In due time I look the colony over, not for the queen, unless I chance to see her, but for eggs, and if I find them then I mark O K on the registering slate that hangs on the hive. If no eggs are found I give another queen-cell, and in due time repeat the search for eggs. It is many times quite difficult to find a queen, but it is very little trouble to look for eggs in the brood combs. Very few colonies fail to rear a queen from the first cell given them. Now that this work is done, I proceed to prepare all for winter.

In a subsequent article I will tell how it came that the brood-combs in all the old colonies were only ⅝ of an inch thick trom top to bottom; and as the winter stores should all be in the upper half or one-third of the brood-combs, these combs are so thin, and the cells so shallow, that the upper parts have not the capacity to contain the required amount of stores.

I now go to hive No. 1, take off the covers, and spread the combs so that they measure about 1¾ inches apart from centre to centre; take out one or more of the nearest empty ones, and then all those that have capped honey in them I uncap, and then cover the hive for three days. I work each colony in regular order, as when I extracted. Then I look them all over again, and if honey is coming in, I find that all combs that contain no brood in the upper edge are being built out and filled with honey; but if there are no signs of new honey, then I begin to feed freely at the entrance, every evening at sundown, or later; when the combs will soon be built out and filled with honey and capped. If the fall crop of honey should be plentiful, and the bees begin to load the lower portion of the combs so as to hinder breeding, then I remove one or more of the outside combs that are full of honey (and that seldom has much or any brood in it at this late season), and extract the honey and return the comb. If new honey keeps coming in I repeat the operation.

If at any time the honey-flow should cease, then I begin at once to feed, and keep it up until cold weather. I would feed at night during a honey-dearth if I had the hive so full that I had to take the honey away the next day to make room for the next feed.

Some may ask, why all this trouble? I answer, it is for several reasons, viz:

1. I find that bees thus managed through the fall of the year, will build out the upper portion of the combs (what some call bridging them over), and a good supply of well cured honey, nicely capped over, is thus placed over the cluster, where it should be for winter.

2. The lower portions of the combs, that the bees cluster on through the winter, are so separated that large clusters can find ample room between each pair of combs. The bees are not so much divided. They preserve more of their animal heat, consume less food, and winter better.

3. Bees that find by the above management some fresh honey coming in all through the fall of the year, will keep up breeding until cold weather puts a stop to it, and a plenty of young bees are present in the hive that will be healthy and vigorous, while new batches of brood are reared in the spring.

On the other hand, if bees are able to gather no late honey, and no feed is given them regularly (as above), they will discontinue the breeding much earlier, and all bees that go into winter quarters are well advanced in life, and before young brood can take their place in the following spring these older ones will have lived out their life; and as they leave the hive to die, it is soon found depopulated, with only a lonely queen and a few helpless bees that are quite insufficient to keep up the required animal heat to prevent the chilling of the newly laid eggs, through the cold spring nights. This is what some call "spring dwindling," but I think it is no more nor less than the effect of early, discontinued breeding the previous fall.

Orion, ♀ Wis.

For the American Bee Journal.

Plain Sheets of Wax.

J. F. HAYS.

On page 468 L. J. S. asks for information in regard to the use of plain sheets of wax. While I have great respect for the judgment and experience of the seven bee-men who so discouragingly answered the query, yet my own experience prompts me to squarely take issue with them. I have repeatedly used plain sheets of wax, both in the brood-chamber and in the surplus department, with the best results, never having discovered a single drone-cell built on the unprinted sheets of wax. But let it be remembered that I never use plain sheets over 4 inches wide.

From the answer of Messrs. Dadant & Son one would suppose that honey-comb was always a very clumsy, hap-hazard affair, until the genius of man enabled the bee to build its comb without mixing drone and worker cells together in an indiscriminate mass. They doubtless gave their honest opinion, but it is decidedly not my observation. I have examined the combs in a number of colonies that were hived on empty frames, without any starters whatever, and I found no more drone-cells than in colonies that were hived on full sheets of worker-comb foundation. Now let Messrs. Dadant & Son explain *why* bees should be more disposed to build an irregular mass of drone and worker-cells on plain sheets than where there are no starters at all.

Again, I have had queens to become drone layers, and whole frames of worker-comb that contained but very few drone-cells were in a short time converted almost entirely into drone-comb. The facts in the case are that when bees want drone-comb or worker-comb they build it regardless of the *kind* of foundation used or any manipulating of man.

Is it not assuming just a little too much to say that bees are as apt to build drone-comb as worker-comb, unless they have printed foundation, as though they have no sense of arrangement or distinction whatever? Such might do for those who believe that man is the only being possessing the power of reason, but I think that a rational observer of nature will look at the matter in a different light.

Mr. J. E. Pond, Jr., rather contumeliously remarks that he cannot see any practical value in such a test, and strongly intimates that he has never had *time* to make such an experiment. Well, he ought to console himself with the fact that he is not the only man who imagines that he has not the time to step out of ruts worn smooth by men who have gone before.

Now if L. J. S. wishes to test the matter, let him not be alarmed by the discouraging answers given to his question.

Macomb, +o Ills.

For the American Bee Journal.

Evaporating and Grading Honey, etc.

L. J. DE SOBOTKER.

I omitted to mention in my former reports that "king cotton" began to bloom early in June, has been blooming ever since, and will continue until frost. The bees have been and are working upon that and "Prince Indian corn"—the two greatest agricultural crops grown here; there are thousands of acres of them within a radius of six miles, from the north-east, east and southeast of this apiary. Strange to say one of our neighboring bee-keepers, Mr. W. C. Stacy, paid me a visit a few days ago, and told me that this apiary was far ahead of any around here, in honey and wax produced so far this season. The hives are at present nearly filled with honey, but it is true that I am two weeks behind with extracting, and can get no help. I am getting full frames of comb completely filled with honey, and entirely capped over.

Had the weather been somewhat more favorable, I judge that this locality would have given very good results as far as quantity of honey is concerned, but under the present methods of operation the great difficulty is to grade the honey, there being so many different blooms at the same time right along after the season is properly started; but this, I think, could be overcome by erecting a small house, attached to the honey-house; this should be with fine wire-cloth sides, having loose, light wooden-shutters to keep out bad weather, the roof of glass, and in this room a good-sized, heavy, tin solar honey evaporator—one by which the honey just stored and extracted could run over slowly into a wooden tank lined with tin inside. This tank should be kept under the solar evaporator, and run upon four wheels, truck-like, on rails, and be constantly covered over with fine wire cloth; to be pushed out from under the evaporator when the weather was hot, and to be pushed back under the evaporator when cloudy or cool. Two or three such would still be better, as they would then act as evaporating deposits, which Mr. Muth recommends as requisite to procure a good article of honey.

By the use of such evaporators I think the nectar could be better graded as to color, taste and quality or density. At present the honey is nearly all of an amber color, and at the North, where a good deal of our honey is sent in whisky and molasses barrels, it is looked upon as dark honey, and considered of inferior quality. This is surely owing to the flavor and richness of the honey being contaminated by the former contents of such barrels, as I have proven right here that the honey taken in this apiary this season, and taken right from the extractor, is very aromatic and highly flavored; in fact it has just as fine and pleasant a taste as any honey I have ever seen in the Northern States or the West Indies; but unfortunately, the Southern States have gotten a bad name for the honey produced in their apiaries, and we are going to have a hard job to put it upon the same footing as the Northern honey. This can only be done by grading our honey and putting it in proper receptacles for shipment. If intended for manufacturing purposes, then we must put into large ones, to save much expense; if for family use, then in small packages. Whisky and molasses barrels should become things of the past in the South.

I am glad and thankful to see that not less than a dozen of our most prominent apiarists have kindly answered my query about bees hanging out, on page 484, by giving their opinions, which are pretty much alike, forming the conclusion that there could have been no nectar in the bloom then existing during the hottest hours of those days. I trust that those who replied will excuse this explanation: At the time I wrote I had tried everything proposed by them all, but the reason for my putting the query was that I had three hives, each containing a pretty strong colony, made or increased from two-frame nuclei, which I just then gave the second story of the hive filled with 10 wired Langstroth frames containing full sheets of Dadant's heavy brood foundation. They at once went to work; worked up the combs, filled them and capped them over in 8 to 10 days, right in that weather and without shade-boards over the hives; the other hives had shade-boards, and were all ventilated on three sides around the bottom boards, as I had put ½-inch blocks upon the bottom-boards. The three had also the same ventilation, but they never dreamed of hanging out or idling. So it will be seen that there was nectar in the bloom, as I stated at the end of query.

How often have I seen a profusion of bloom without the sign of nectar; this is no doubt owing to atmospheric influences. which I am aware we cannot control, and which would cause bees to hang out in idleness, as Mr. J. E. Pond, Jr., very tersely observes when he says: "There is nothing to do for them, as there is nothing for them to do."

Riverton,⊶ Miss.

For the American Bee Journal.

Experience with Foul Brood.

N. H. WARD.

I have had considerable experience in attempting the cure of foul brood, and I will try and inform Dr. J. C. Thom what I have learned.

In 1881 I had 10 good, strong colonies of bees that were affected with foul brood. I did not know what it was, but a friend of mine informed me, and I went to work, using salicylic acid and borax. In the spring of 1882 I had no bees. I sent to the South early and got a start again, and my bees had no foul brood that year. In 1883 it appeared again, and it has been in my apiary ever since until now. In 1885 I used 20 parts of water to one part of phenol, and 1 part of the mixture to 20 parts of A sugar syrup. I used it after the honey-flow, so that the bees took well to it. It did not effect a cure, but I believe the remedy kept the disease in check. I learned by close observation that after the foul broody matter had dried in the upper and outer edges of the brood, the bees would fill them with honey and seal it up; then, when honey was not coming in sufficiently, they would use that honey for brood-rearing. Hence, so many opinions that foul brood matter is contained in the honey. By the use of such honey, foul brood will continue to exist; and, further, I do not wish to doubt the opinion of any one, but I do not believe that foul brood can be cured with medical treatment of any kind.

On page 139 I gave my plan of cleansing hives and combs. I still endorse the same opinion for hives and frames, but it will not do for combs. At the beginning of the white clover flow I prepared a hive thus cleansed, filled with foundation. I brushed the bees carefully off the combs in the hive thus arranged, dug a pit, cut out the combs, and burned all, and so far the diease with it. The cleansing with lye is not original with me. W. O. Pierce, Professor of Latin at the Asbury, now the De Pue University, made mention of it, and asked me to try the remedy. I now have 4 of the best colonies of bees that I ever owned.

Winchester,⊶ Ind.

Convention Notices.

☞ The 4th annual basket picnic of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Schuetzen Park, Iowa, on Thursday, Aug. 26, 1886. All interested in bee-culture are earnestly requested to be present and make this the grandest picnic in the history of the Organization.—I. V. McCagg, Wm. Gronroll, and Wm. Goos, Committee of Arrangements, Davenport, Iowa.

☞ The Iowa State Bee-Keepers' Association will meet on the Fair Grounds in Des Moines, on Tuesday, Sept. 7, 1886, at 2 p.m., continuing in session during that and the following two or three days. A large and substantial tent has been secured and is now at hand for the use of the society. Any or all of the 6,000 bee-keepers of Iowa are urgently requested to be present and help make the meeting a pleasant and profitable one.

A. J. NORRIS, *Sec.*

O. O. POPPLETON, *Pres.*

Local Convention Directory.

1886. *Time and place of Meeting.*

Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Sept. 6.—N. W. Ills. & S. W. Wis., at Dakota, Wis.
Jonathan Stewart, Sec., Rock City, Ills.

Sept. 7.—Iowa State, at Des Moines, Iowa.
A. J. Norris, Sec., Cedar Falls, Iowa.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Another Bee-Paper Gone.—B. F. Carroll, Dresden,♂ Texas, on Aug. 14, 1886, says:

The weekly visits of the AMERICAN BEE JOURNAL are cheering to Texas bee-keepers in this trying hour. I have just returned from Waco, Texas, where I went, Gabriel like, to see if the *Texas Bee Journal* could be resurrected: A loud blast from Gabriel's horn did not awake the quiet sleeper, and alas, I fear the *Texas Bee Journal* is forever lost; unless future generations should find out its hiding-place. It may be buried in some secret vault under the ruins of its former home, but I could find no letters, words, marks, figures or characters to point out its final resting place. *Requiescat in pace.* From all over the State comes a wail—"no honey." My crop so far is 22 pounds per colony, and I am thankful for this little mite. I may get more in September. Bees here are in good condition.

Spanish-Needle Honey — Convention.—J. M. Hambaugh, Spring,⊶ Ills., on Aug. 16, 1886, writes as follows:

My honey product so far is 7,390 pounds of extracted and 200 pounds of comb honey from 105 colonies, spring count, with flattering prospects of a good fall yield. The long protracted dry weather cut our honey-flow short, but it has ended with copious rains within the last few days. Spanish-needle is taking a luxuriant growth on the low lands, and the honey produced from this plant is fast coming into public favor. Its rich, bountiful golden color, exquisite fragrance and taste, with heavy, rich body, weighing about 12 pounds to the gallon, make it a favorite among epicures, and is sought for in our home market above all others, and should be quoted in prices with white sage, white clover and linden. We hope the public that are in any way interested in honey production will bear in mind that our Illinois Central Bee-Keepers' Convention will take place at Mt. Sterling, Ills., on Oct. 19 and 20, 1886, and that no pains will be spared in making it one of the most enjoyable and instructive events of the season; and we trust that every one so interested will make it a point to be present and take part in the discussions of this important but sadly neglected industry. We are negotiating for hotel accommodations, which cannot be excelled in the State, for a city of its size. Farther reports will be given, as the time approaches.

Bee-Sting Remedy — Introducing Queens.—Chas. Smith, Plum Tree, ♂ Ind., on Aug. 13, 1886, writes:

My bees are doing splendidly, and there is a good prospect for an excellent honey crop this fall, as there is an abundance of white clover and other pasture. I would like to give a remedy for bee-stings. Take the barrel of a key and place it over the spot where the bee has stung and press it, and it will extract the sting and it will not swell. We are talking of forming a bee-keepers' association in this county. Will the bees kill the old queen when a new queen is put into the hive in a cage? Is it too late to introduce a queen? If so, when is the best time?

[We have published the key-remedy for bee-stings many times. It is not too late to introduce queens; it may be done on any fine day. When a new queen is caged, the old queen is in no danger, unless the bees intend to supersede her anyway.—Ed.]

Honey Improving by Age.—Dr. R. M. Burwell, West Winsted, ♀ Conn., writes:

I would like to inquire whether honey improves by age. I have some honey which has a strong or rank taste. If I thought it would lose that strong taste, I would keep it for a year, or a time at least. I have been told that it would improve by age. We got no honey from basswood this year.

[Age will modify the strong taste in some measure, but much depends on the flora from which it was gathered.—Ed.]

My Experience with Bees.—Wm. M. Rowe, Lawrence, ○+ Kans., on Aug. 7, 1886, writes:

I commenced last spring with 4 colonies, and have increased them to 10. I secured 2 swarms, 2 got away, and I made 4 colonies by division; consequently I have not obtained much honey in sections. I have considerable in the brood-chambers, but I do not know just when I ought to take it out. Should it be "now or never?" The method I used to fasten foundation in sections is as follows: I took a piece of pine 1-16 of an inch narrower than a folded section, and half as wide; nailed it to a board 5x7 inches; procured a tin vessel with a spout, into which I put sufficient wax. (It holds half a pint.) I put it on the stove, and when heated enough to run I placed the section on the board, then the piece of foundation (which should be cut with a square edge) on the block, poured on the wax, and by holding it at the proper angle I could run it all around and back into the vessel again if there was too much. If the wax is too hot it will melt the foundation. By using two blocks, and thoroughly wetting one occasionally, the wax does not adhere, and time is saved. I want to transfer 3 colonies to better hives. Should it be done this fall? or had I better wait until springtime comes again?

[If the amount of honey in the brood-chamber prevents the queen from depositing the eggs necessary to keep the colony supplied with young bees, with which to go into winter quarters, then extract all over about 25 pounds, which they will require during the winter. You can transfer the bees during any warm afternoon, when the bees are actively at work. About the time of fruit bloom is generally preferred, because then they will have but little honey in the hives —still it can be safely done now.—Ed.]

Sow Thistle.—B. Losee, Cobourg, Ont., says:

I send a honey-plant that is new in this section. Like the blue thistle of the dandelion tribe, it has white, milky sap. It reaches 2 feet in height, and comes into flower just after basswood; and, like the dandelion, it is very attractive to bees. It produces a very yellow pollen. It has come to stay, and, like the dandelion, it takes in any rich soil, and propagates itself by division, it being a hybrid; it has no seed to signify. What is its name?

[This is *Sonchus asper*, or sow thistle. Most all of the compositæ furnish more or less food for bees.—A. J. Cook.]

Prevention of Second-Swarms, etc. —D. R. Rosebrough, Casey, ○+ Ills., on Aug. 18, 1886, says:

The way I managed my bees to prevent their swarming the second time, was to take out of the hive 2 to 4 frames of brood and give it to the swarm. It worked very nicely. Out of 25 colonies I did not have a second swarm. The advantages are these: It will hold the swarm whether the queen is with it or not. More honey can be secured, for the new colony is not out of the sections three days. It always insures straight combs. It saves foundation. It is necessary to give full sheets to the old colony, for when the young bees have no queen they always build drone-comb; but the new colony has their queen with them and will not build drone-comb, and by putting empty frames between the frames of brood you will have a strong worker colony, and the old colony will build up and be ready for the fall crop. This has been a very ordinary season. The bees came through the winter in good condition, but it was dry, and yet honey has been coming in slowly ever since the middle of April. There has not been a large yield, but I got a ton of the finest white clover honey I ever saw. Spanish-needle looks promising.

Removing Young Bees. — T. T. Phlegar, Pearisburg, ♀ Va., on Aug. 9, 1886, says:

Will you please tell why my bees carry out their young? The young bees are perfect and nearly strong enough to fly. They are carried out in great numbers and allowed to starve. Will they act thus when the honey-flow is cut short? How can I remedy it? Our season has been very poor ever since poplar ceased to bloom. It has been very wet and cool all summer. To-day it is cool and cloudy. What honey the bees have is very thin and watery.

[A cessation of the honey-flow is not a sufficient reason for the actions of the bees you mention. Evidently there is something wrong, but not being there to critically examine, we cannot determine what it is. Probably the bees are imperfect in some way. Have any of our readers noticed similar actions among their bees? If so, will they please give a description of it in the Bee Journal.—Ed.]

Fumigator for Introducing Queens. —Thos. G. Glover, Palmetto, ♀ Fla., on Aug. 7, 1886, writes:

Bees have done very well this summer, considering the damage done by the cold of last winter. The following is the way I make a cheap fumigator for introducing queens, etc. I have a Quinby smoker. I cut a piece of wire-cloth about 2 inches square, and push it well down in the nozzle of the smoker; drop in a few cotton rags on the wire-cloth and pour in about a table-spoonful of smoking tobacco; put in a few more rags and light it with a coal of fire or match. I have ready another piece of wire-cloth about 4 inches square to press down on the rags and tobacco to hold all in place; put the nozzle on the smoker and blow. This makes a good fumigator with but little cost or labor. I have introduced a number of virgin queens to full colonies without loss so far. For the benefit of some beginner I will tell how I did it. Unqueen the colony in the evening, and let it remain until the second evening (48 hours), then open and destroy all queen-cells, and at the same time have the queen caged ready to slip in between two combs of brood and honey. Press the frames together to hold the cage in place. I uncap a few cells of honey before putting the cage in, so that the young queen can get plenty to eat. Close the hive, and about sunset the next evening open the hive. Take the stopper out of the cage and fill the hole with comb honey cut out of the frame by the side of the cage. Close the hive and blow in a liberal supply of tobacco smoke at the entrance. The bees will release the queen during the night and receive her kindly. This is the Alley method, or something near it. If the hive is not opened for a few days, all the better.

Sources of Honey-Dew. — R. F. Holtermann, Brantford, Ont., writes :

The sources of so-called honey-dew appear to become more and more numerous day by day. I have often heard that bees gather honey from "wheat stubble," but I never paid much attention to the matter. I should think in the case mentioned on page 503, that owing to an abnormal condition of the wheat, the crop being a poor one, the matter which should have been converted into starch and possibly fibrine, although the abundance of straw would lead us to believe to the contrary, had remained or been converted into saccharine matter. Only a week ago I was asked whether I had ever seen bees working on clover leaves. I confessed that I had not, and was then told that in Waterloo county they had several times worked freely upon a saccharine substance which had been found upon such leaves. The theory that such a substance is excrement from aphides has been pretty well exploded. It is also doubtless frequently an excrement from plant life, due to an abnormal condition owing to season, foreign bodies in the plant, or kindred causes. In this locality the present season has, to the best of my knowledge, given us but little honey-dew, and that little from the oak.

The Northwestern Convention at Chicago.—W. Z. Hutchinson, of Rogersville, Mich., Secretary of the Northwestern Bee-Keepers' Society, on Aug. 19, 1886, writes :

The date for holding the Convention of the Northwestern Bee-Keepers' Society in Chicago, is a *fixed* date —that it is held during the last week of the Exposition. Knowing this, and thinking that many of the members were also aware of the fixedness of the date, the secretary neglected to announce the date in the Convention Directory, and in the bee-papers until the time for holding the meeting approached. Usually this late announcement answers every purpose; *this* year, however, by this neglect, the officers of the North American Bee-Keepers' Society have, by accident, chosen the same date for holding *their* convention. When the mistake was discovered the officers of the North American invited the Northwestern to again join them in convention, and have one grand union convention at Indianapolis. To hold two conventions of a National character, in such close proximity at the same time, or even at nearly the same time, would be an injury to both. Better one grand meeting than two *thin* ones. The officers of the North American very kindly offered to *postpone* their meeting, if the Northwestern *refused* to join them, but, as they were in the field months ago with their published date, and the time is now near at hand, they could not justly be asked to put off their meeting; and the only gentlemanly, brotherly course left is for the Northwestern to accept their invitation, and then, in return, invite the North American to meet with the Northwestern in Chicago, next year.

[The Indiana State Association, several county societies, as well as the Northwestern of Chicago, will all meet with the "North American" in union convention on Oct. 12, and two succeeding days. Let there be a general rally and a monster convention.—Ed.]

* * *

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
Texas Bee Journal	2 00	1 75
The 7 above-named papers	6 50	5 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

* * *

Convention Notices.

☞ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.
E. T. Abbott, *Sec.*

☞ The N. W. Ills. & S. W. Wis. Bee-Keepers' Association will hold its next meeting at the residence of F. D. McKibben, 1½ miles east of Dakota, on the Milwaukee & St. Paul R. R., on Tuesday, Sept. 7, 1886. Jonathan Stewart, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. Hambaugh, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. Cutting, *Sec.*

☞ The next meeting of the Stark County Bee-Keepers' Society will be held in Grange Hall, at Canton, O., on Aug. 31, 1886. M. Thomson, *Sec.*

Honey and Beeswax Market.

Office of the American Bee Journal,
Monday, 7 a. m., Aug. 23, 1886.

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY.—It continues to arrive very freely. The demand is light and sales are made chiefly at 12@13c. Extracted is also quiet with prices unchanged, 6@7c.

BEESWAX.—It is easier, and 23c. is about all will bring.

R. A. Burnett, 161 South Water St.

NEW YORK.

HONEY.—The present quotations are as follows : Fancy white comb in 1-lb. sections, 10@12c. ; fancy white comb in 2-lb. sections, 8@10c ; buckwheat in 1 and 2-lb. sections, 5@8c ; extracted white clover, 6c ; extracted, California, 4½@5c ; extracted, Southern, per gallon, 45 to 55c.

BEESWAX.—23 to 28c.

McCaul & Hildreth Bros., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

Blake & Ripley, 57 Chatham Street.

DETROIT.

HONEY.—The market is little dull, fruit interfereing with the demand. Best comb honey in 1-lb. sections, 13c.

BEESWAX.—Firm at 23c. for fair quality.

M. H. Hunt., Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is slow for all kinds and shapes of honey. Prices of extracted honey range between 3½@7c., according to quality ; and choice comb honey brings 14@15c. in a jobbing way.

BEESWAX.—Demand is good and arrivals fair. We pay 20c. for good yellow.

C. F. Muth & Son, Freeman & Central Ave.

CLEVELAND.

HONEY.—The demand for honey is not very lively at present, but prices are steady. Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. Kendel, 115 Ontario Street.

KANSAS CITY.

HONEY.—The receipts of new comb honey are fair, with a good demand, and light stock in the city. Extracted is in light demand. We quote : ½-lb. sections, 16c. ; white clover, 1-lb. 13@14c. ; dark, 1-lb., 10@12c. ; white clover, 2-lbs., 11@12c. ; dark, 2-lbs., 9@10c. ; white sage California, 2-lbs., 10@11c. ; dark, 2-lbs., 8@9c. ; extracted white clover, 5@6c. ; dark, 3@4c. ; white sage California, 4@5c. ; dark, 3½@4c.

BEESWAX.—20@22c.

Clemons, Cloon & Co., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is fairly supplied with honey, trade is dull, prices depressed, and the outlook is for a large production. Already some is being peddled about the city by the producers themselves, demoralizing the prices, which should not be done. We quote : Choice white in 1-pound sections, 14@15c.; 2-lbs. 13@15c. Dark honey not wanted. Extracted, white, in barrels and kegs, 5@7c.; in tin cans, 6@8c.; dark in barrels or kegs, 4@6.

BEESWAX.—25c.

A. V. Bishop, 142 W. Water St.

SAN FRANCISCO.

HONEY.—It has been extensively handled the last week, and prices are firmer. The supplies of choice honey are by no means excessive in this city, and all lots of choice extracted honey find ready buyers at about 4c. Owners are reserved and refuse to sell under 4c. in the country, as prices seem low. We quote 3¾@4c. for extracted honey, and 7@9c. for comb honey, according to quality.

BEESWAX.—It finds buyers at lower prices—20 to 22c. for choice.

Schacht & Lemcke, 122-124 Davis St.

HONEY.—Prices are so low that honey-producers are holding back their product ; still the market is well supplied. We quote : Comb, extra white, 8½@10c. ; off grades, 6½@7½c. Extracted, white, 4@4¼c. ; amber, 3½@3¾c. ; dark, 3c.

BEESWAX.—22½@23c.

O. B. Smith & Co., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Firm at 22c. for prime.

D. G. Tutt & Co., Commercial St.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¼c. per light, extra.

◆

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at **$6.00** each.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so *cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

☞ **Sweet Clover,** or *Melilotus Alba,* is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

Frank Leslie's Popular Monthly for September contains a brilliant article on "Charles Stewart Parnell," illustrated by a series of pictures of Avondale, the home of the greatest Irish leader after O'Connell in this century. Mrs. C. Ingersoll Gara describes, with pen and pencil, the charming land and sea scapes at Erie, the ancient Presqu' Ile. This number is a most attractive one and full of attractively told facts and charming pictures.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Advertisements.

Good Chance for You.
IF there be any one that would wish to engage in Bee-Culture in Florida—please immediately correspond for particulars with
A. A. DODGE,
34A1t PALMETTO, Manatee Co., FLA.

APIARY SALE!
125 COLONIES of Italian and Hybrid Bees with good winter stores in L. wired frames, at $4.00. Also Given Press. White clover and basswood range. No other bees near. Reason for selling—have finished law studies and am going West. GEO. H. SHIBLEY,
34A1t RICHMOND, ILLS.

HONEY and BEES for SALE.
5,000 POUNDS OF HONEY, White Clover and Basswood, in 1-pound Sections. Also, 100 COLONIES of Bees in good hives; good straight combs, strong with bees and heavy with honey—at $6.00 per Colony. WILLIAM BLAKE,
32A3t BUCHANAN, Berrien Co., MICH.

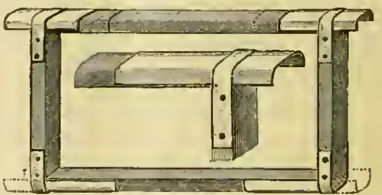
Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE Hives and Sections.—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

ROOT'S Simplicity and CHAFF HIVES, Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand, Shipping-Crates, all sizes, single and double tier. E. R. NEWCOMB,
PLEASANT VALLEY, Dutchess Co., N. Y.
27A8t

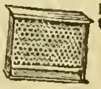
BEESWAX.
We pay 20c. per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.
THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Metal Reversible Frame Corners.
ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.



Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. F. M. JOHNSON,
WASHINGTON DEPOT, Litchfield Co., CONN.
32Atf

FLAT-BOTTOM
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

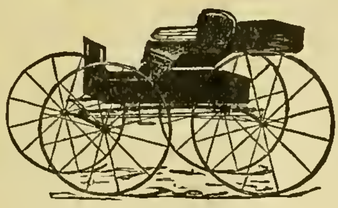
Italian Queens.—We have a few untested queens which we can send by return mail. Three for $2.75; six for $5.00; twelve for $9.00. For Tested, double the prices.
THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE AMERICAN APICULTURIST
SENT one year, and a Tested Italian Queen, to each subscriber—all for $1.50. Sample copies free. Address,
30Atf HENRY ALLEY, Wenham, Mass.

COLUMBUS BUGGY CO.

Columbus, Ohio.



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Warranted Strictly First-Class Throughout.
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Style and Finish Unequalled.

☞ **Write for Catalogues** and name of nearest dealer. Our sign, **Columbus Buggy Company's Buggies,** in every town.

☞ At New Orleans World's Exposition was awarded first premium for finest display of vehicles, against sixty-four competitors.

☞ Some dealers are trying to deceive the public by using a name plate "Columbus Buggy." All such are spurious. None are genuine unless the full name—"Columbus Buggy Co."—appears. Look out for this description. Carefully examine name-plate.

34A14t

BEES FOR SALE.

20 **COLONIES of Italian Bees** in Simplicity hives, **$8 00.** The Queens are from the best Imported Mothers, and the hives contain honey enough for winter. Also **Queens,** either Italian or Carniolan-Tested, $2.00, Untested, $1.00; 10 per cent. discount on orders of 6.

Honey Wanted.—I will take some on commission, trade-supply, or pay cash.

F. J. CROWLEY,
34Atf BATAVIA, N. Y.

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO ILL.

AMERICAN APICULTURIST.

Send your address on a postal card for a Sample Copy. Address,

AMERICAN APICULTURIST,
33Atf WENHAM, MASS.

TESTED Queens, (Imported Mother), $1.25 each; $12 per doz.—O. N. Baldwin, Clarksville, Mo.
4A1y

W. Z. HUTCHINSON,

Is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows: Single Queen, $1.00: 6 Queens for $5.00; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound). Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.

W. Z. HUTCHINSON,
8Etf ROGERSVILLE, Genesee Co., MICH.

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece,	40c per lb. for heavy.
V-Groove, $4 per 1,000	50c " " light.
Less for lots of 10,000	Send for Samples and Price-List.

A. F. STAUFFER & CO.,
15Etf STERLING, ILLS.

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

ATTENTION, BEE-KEEPERS!!

NOW is the time to Italianize Cheap Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates: 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
32Atf COLERAINE, MASS.

ITALIAN QUEENS.

I **WILL** furnish **Warranted Italian Queen-Bees** for $1.00 each; Tested Queens for $2.00 each. Delivered by mail.

PETER BRICKEY, Lawrenceburg, Ky.
18E10t

WANTED!

500,000 Names.

EVERY Poultry, Bee or Pet Stock Breeder subscribing for "THE POULTER" during the next 90 days—and sending us a list of not less than twenty-five (25) *bona fide* names and addresses of persons who are or may be interested in POULTRY (so that we may send them Sample Copies)—will have his or her name inserted in our "Breeder's Directory," FREE OF CHARGE.

To the Breeder sending the largest list of names will be presented a *one inch advertisement* in "THE POULTER," for Six Months; to the second largest list, for Four Months; to the third largest list, for Two Months; and to the fourth largest list, for One Month, *free of charge.*

This gives *every* breeder (who subscribes) a *Free "ad" in our Breeder's Column.* "THE POULTER" one year *and a chance for a one inch "ad" free*—ALL FOR **50** CENTS.

Address, **THE POULTER,**
32A3t MT. VERNON, OHIO.

Golden Italians.

WARRANTED Queens 75 cts. each; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,

JAMES WOOD, North Prescott, Mass.
20A20t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

FREE! New Book of Fancy Works with **100** Illustrations, **150** New Stitches, **10** Special Offers, **200** Picture Bulletin 48-col. story-paper, all for **4c** postage
National Bazar, 7 W Broadway, N. Y.
33A13t

TEN VALUABLE BOOKS FREE!!

The Publishers of **City and Country,** a twenty-eight page publication containing from twenty-five to thirty illustrations in each issue, in order to increase its circulation, make the following unparalleled offer for the next few weeks: To everyone who will remit by **Postal Note** the amount of the regular yearly subscription—fifty cents—they will send postpaid any **ten** of the books in the list below and City and Country for one year. These books are published in neat pamphlet form, many of them **handsomely illustrated,** and all are printed from **good type upon good paper.** They treat of a great variety of subjects, and we think that no one can examine the list without finding therein many that he or she would like to possess. In cloth-bound form these books would cost **$1.00 each.** Each book is complete in itself.

1. **The Widow Bedott Papers.** This is the book over which your grandmothers laughed till they cried, and it is just as funny to-day as it ever was.
2. **Winter Evening Recreations,** a large collection of Acting Charades, Tableaux, Games, Puzzles, etc., for social gatherings, private theatricals, and evenings at home; illustrated.
3. **Back to the Old Home.** A Novel. By Mary Cecil Hay, author of "Hidden Perils," etc.
4. **Dialogues, Recitations and Readings,** a large and choice collection for school exhibitions and public and private entertainments.
5. **The Standard Letter Writer** for Ladies and Gentlemen, a complete guide to correspondence, giving plain directions for the composition of letters of every kind, with innumerable forms and examples.
6. **The Frozen Deep.** A Novel. By Wilkie Collins, author of "The Woman in White," etc.
7. **Red Court Farm.** A Novel. By Mrs. Henry Wood, author of "East Lynne," etc.
8. **The Lady of the Lake.** By Sir Walter Scott. "The Lady of the Lake" is a romance in verse, and of all the works of Scott none is more beautiful than this.
9. **In Cupid's Net.** A Novel. By the author of "Dora Thorne."
10. **Amos Barton.** A Novel. By George Eliot, author of "Adam Bede," "The Mill on the Floss," etc.
11. **Lady Gwendoline's Dream.** A Novel. By the author of "Dora Thorne," etc.
12. **The Mystery of the Holly Tree.** A Novel. By the Author of "Dora Thorne."
13. **The Budget of Wit, Humor and Fun,** a large collection of the funny stories, sketches, anecdotes, poems and jokes that have been written for some years; illustrated.
14. **John Bowerbank's Wife.** A Novel. By Miss Mulock, author of "John Halifax, Gentleman," etc.
15. **The Gray Woman.** A Novel. By Mrs. Gaskell, author of "Mary Barton," etc.
16. **Sixteen Complete Stories** by Popular Authors, embracing love, humorous and detective stories, stories of society life, of adventure, of railway life, etc., all very interesting.
17. **Jasper Dane's Secret.** A Novel. By Miss M. E. Braddon, author of "Aurora Floyd," etc.
18. **Fancy Work for Home Adornment,** an entirely new work upon this subject, containing easy and practical instructions for making fancy baskets, wall pockets, brackets, needle work, embroidery, etc., etc., profusely and elegantly illustrated.
19. **Grimm's Fairy Stories for the Young.** The finest collection of fairy stories ever published. The children will be delighted with them.
20. **Manual of Etiquette** for Ladies and Gentlemen, a guide to politeness and good breeding, giving the rules of modern etiquette for all occasions.
21. **Useful Knowledge for the Million,** a handy book of useful information for all, upon many and various subjects; illustrated.
22. **The Home Cook Book and Family Physician,** containing hundreds of excellent cooking recipes and hints to housekeepers, also telling how to cure all common ailments by simple home remedies.
23. **Manners and Customs in Far Away Lands,** a very interesting and instructive book of travels, describing the peculiar life, habits, manners and customs of the people of foreign countries, illustrated.
24. **57 Popular Ballads.** Same size as sheet music. All the old and new songs.
25. **Called Back.** A Novel. By Hugh Conway, author of "Dark Days," etc.
26. **At the World's Mercy.** A Novel. By Florence Warden, author of "The House on the Marsh," etc.
27. **Mildred Trevanion.** A Novel. By "The Duchess," author of "Molly Bawn," etc.
28. **Dark Days.** A Novel. By Hugh Conway, author of "Called Back," etc.
29. **Shadows on the Snow.** A Novel. By B. L. Farjeon, author of "Bread-and-Cheese-and-Kisses," etc.
30. **Leoline.** A Novel. By Mary Cecil Hay, author of "Brenda Yorke," etc.
31. **Gabriel's Marriage.** A Novel. By Wilkie Collins, author of "No Name," etc.
32. **Reaping the Whirlwind.** A Novel. By Mary Cecil Hay, author of "Old Middleton's Money," etc.
33. **Dudley Carleon.** A Novel. By Miss M. E. Braddon, author of "Lady Audley's Secret," etc.
34. **A Golden Dawn.** A Novel. By the author of "Dora Thorne," etc.
35. **Valerie's Fate.** A Novel. By Mrs. Alexander, author of "The Wooing O't," etc.
36. **Sister Rose.** A Novel. By Wilkie Collins, author of "The Woman in White," etc.
37. **Anne.** A Novel. By Mrs. Henry Wood, author of "East Lynne."
38. **The Laurel Bush.** A Novel. By Miss Mulock, author of "John Halifax, Gentleman," etc.
39. **Robinson Crusoe.** A thrilling narrative by Daniel De Foe, describing the adventures of a castaway on an island in the South Pacific Ocean.
40. **How to Make Poultry Pay.** A practical and instructive series of articles by Mr. P. H. Jacobs, Poultry Editor of "The Farm and Garden."
41. **Parlor Magic and Chemical Experiments,** a book which tells how to perform hundreds of amusing tricks in magic and instructive experiments with simple agents.
42. **Gems of the Poets,** containing eight charming selections from Tennyson, Longfellow, Whittier, Byron, Shelley, Moore, Bryant, and others.
43. **Building Plans for Practical, Low-cost Houses,** a full description and plans of Eight modern houses, ranging in price from $500 to $4500.

Immediately upon receipt of subscription price, the ten books you select will be sent you, postpaid, and also special terms by which you can make from five to ten dollars per week with little effort, if you choose to do so. The entire list of -43- books and City and Country for one year will be sent—all postpaid—on receipt of only one dollar. Accept this generous offer at once. Address the publishers, **WILL C. TURNER & CO., Columbus, Ohio.**

CONDENSED PRICE-LIST
OF
BEE-KEEPERS' SUPPLIES
FOR SALE BY
Thos. G. Newman & Son,
923 & 925 West Madison Street,
CHICAGO, ILLS.

——o‡o——

Our Illustrated Catalogue (36 pages) sent *free*, upon application.

——o‡o——

HEDDON'S NEW HIVES.

SAMPLE HIVE **$4.00.** This includes the bottom-board and the stand; a slatted honey-board, and a cover; two 6-inch brood-chambers, each containing 8 frames; 2 surplus arrangements, each containing 28 1-lb. sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is nailed and painted, ready for immediate use.

For Hives Ready to Nail, see our Catalogue.

LANGSTROTH HIVES.

BROOD chamber with portico and 7¼ in. cap, 10 frames, nailed, not painted $1.25. Material, in the flat, 90c. each. With movable side, $1.75; in flat, $1.30.

We also make our 7¼-inch caps with a sloping or cottage roof—price 15 cts. nailed and 10 cents flat, in addition to the prices of the Standard Langstroth hive, which has a flat top.

LANGSTROTH FRAMES.

MATERIAL (9⅛ x 17⅝ in., outside) per 100, $1.25. Per 1000, $12.

SUPERS for Comb Honey.

STORY (32 1-℔. sections) nailed, 75c. Material, in the flat, 50c.

Story (24 2-℔.) same price as above.

Story (7 wide-frames, with 21 2-℔. sections and separators) nailed, 75c. Material, in the flat, 60c.

Story (7 wide frames, with 56 1-℔. sections and separators) nailed, $1.50. Material, in the flat, $1.05.

☞ Comb-Honey Rack (18 2-℔. sections, separators and glass) nailed $1, flat 50c. Rack without sections, &c. 35c. flat 15c. Rack material, in the flat, by mail, 75c.

HIVE CLAMPS.

FOR securing loose bottom-boards, VanDeusen's, sample set, by mail 15c One or more, by express, 10c. each.

Ackerman's—Sample set, by mail 20c. One or more, by express, 15c. each.

SECTIONS for Comb Honey.

ONE-PIECE (Forncrook).—Of these we keep in stock the 4¼x4¼ in. size holding 1 ℔. and 5¼x6¼ inches, holding 2℔., a trifle *less* than 2-inches wide, with narrow or wide tops; also, both sizes 1¾ inches wide, with narrow tops.

	4¼x4¼	5¼x6¼
1,000 Sections	$4.00	$4.50
500 "	2.25	2.50
250 "	1.25	1.50
100 "	60	70

Odd sizes, 5x6 or less, (not less than 500 made) $3 for 500; $5.50 per 1,000.

DOVETAILED, four-pieces, 5¼x6¼, wide or narrow tops, and 4¼x4¼ with narrow tops only, (all *scant* 2 in. wide). Prices same as the above.

PRIZE—to be nailed—are of 2-lb. size only. Prices same as the above.

HONEY CARRIAGE,

REVOLVING Comb Hanger, Tool Box and Recording Desk, combined. Price, complete, $18.00.

BARNES' SAWS.

A COMPLETE illustrated catalogue and price-list of these machines will be mailed free, upon application.

ATOMIZER.

TO change the scent of bees when introducing Queens, uniting or dividing colonies, making nuclei, etc. Price, 75c. Mailed for 10c. extra.

SWARM CATCHER.

BAILEY'S swarm catcher consists of a frame-work, made of wood and covered with wire-cloth, which can be set at any angle. By its use, with a queen cage, a swarm can be compelled to stay in any hive, until the swarming-fever is over. Price $3.80.

COMB FOUNDATION.

WE keep three sizes in stock, viz: 12x18, 8x16½, and 10x11 inches. Special sizes, in a week, at same prices, which may be changed without notice.

1 lb., by mail, (small sheets)	65c.
10 " or less, by express, ℘ lb.,	40c.
25 " " " "	39c.
50 " " " "	38c.
100 " " " "	37c.

Thin, *for comb honey,* **10c.** ℘ ℔. *extra.*

Extra Thin, (VanDeusen's *flat-bottomed* or Vandervort's) **20c.** ℘ ℔. *extra.*

Wired, (8x16½ or 10x11 in.) 1 to 25 pounds 60c. ℘ ℔.; 25 to 100 lbs. 58c. ℘ ℔.

COMB FOUNDATION MILLS.

WE can furnish any of the Comb Foundation Machines, or the Given press, at manufacturers' prices.

FOUNDATION CUTTER.

Small size (tin wheel)	10c
Large size (steel wheel)	75c

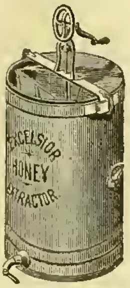
When wanted by mail, add 2 cents to the former, and 5c. to the latter price.

SHIPPING CRATES.

MATERIAL for 50 crates (to hold 12 2-℔. sections) no glass, $4.75. A sample nailed, with sections, 50c.

Material for 50 crates (to hold 24 1℔. sections) no glass, $6.00. Sample, 60c.

HONEY EXTRACTORS.



THE **$8** and **$10** sizes are made to suit those who desire a cheap but practical machine. The cans are smaller, the sides of the baskets are stationary, and they have no covers, strainers, or metal standards.

Being made entirely of metal, they are very light and durable, and have lugs for firmly fastening to the floor.

Those who want the BEST honey extractor are referred to those who are now using the Excelsior.

For 2 frames,	13x13	inches	$ 8 00
For 2 "	10x18	"	8 00
For 3 "	10x18	"	10 00
For 4 "	10x18	"	14 00
For 2 "	13x20	"	12 00
For 3 "	13x20	"	12 00
For 4 "	13x20	"	16 00

The 3-frame basket is in a can of the same size and style as the 2-frame. The 4-frame basket is in the larger can; the latter 4 have metal standards for the basket to revolve upon, leaving room underneath the basket for 50 or 80 pounds of honey.

EXCELSIOR Wax Extractor.

WE make two sizes, the smaller one having a larger capacity than the Swiss Wax Extractor. Prices, small size, **$4**; large size, **$5.00**. Some of the advantages of this Extractor are:

1. It is more easily operated, there being no necessity for removing the top to re-fill with water.
2. It melts the wax quicker, because it is brought into a more direct contact with the steam.
3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.
4. The filler for water acts also as an indicator, showing the amount of water in the boiler; when the steam escapes through the filler, more water is required. Keep a kettle of hot water ready to re-fill when required.

PURE PHENOL.

FOR the cure of **Foul Brood,** used by Mr. Cheshire, of London, England. As it is a liquid, it can be sent only by express. Price, 25c. per oz.

TIN POINTS, for Glassing Sections

SQUARE or **V**-shaped, 1,000, by mail, 50c. By express or freight, 40c.

SHUCK'S BEE-FEEDER.

FOR feeding bees at the entrance of the hive, any time; it feeds much or little, as may be desired; feed can be reached only by the bees from the inside of the hive. Price, by mail, 30c. By express, 25c. each, or $2.40 per doz.

PERFORATED-ZINC.

DRONE and Queen Excluders.—We carry in stock two sizes: 19¾x14½ inches, for Langstroth hives—price 25 cents each; also in sheets 3x8 feet—24 sq. ft.—price, $2.75 per sheet. We will cut pieces at 15 cents per sq. ft.

HONEY KEGS.

THESE Kegs are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap, and often cheaper. They need no waxing, but should be well scalded with boiling water before used. Do not soak them. Prices:

5 gallon, to hold	50 lbs.	40c
10 " "	100 lbs.	60c
17 " "	175 lbs.	80c

A discount of 10 per cent. on 25, or more; 12½ per cent. on 50, or more; and 15 per cent. on 100, or more, kegs.

LABELS FOR PAILS.

THESE labels are of two sizes, printed on colored paper; they are very attractive, and add greatly to the appearance of the pail when filled and offered for sale. Either size, printed with name and address, at the following prices—(not less than 100 printed):

	Small.	Large.
100	$1 00	$1 00
250	2 00	2 25
500	3 00	3 50
1,000	4 00	5 00

TIN PAILS FOR HONEY.

THE Straight Pails of all sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Samples of the 4 sizes, put inside of one another as a nest, price, 50 cts. by express. Prices:

		Per doz.	Per 100
Gallon, holding	10 lbs.	$1 80	$12 00
½ Gallon, "	5 "	1 50	9 00
Quart, "	2½ "	1 20	7 00
Pint, "	1¼ "	65	4 00

THE Tapering Pails of all sizes have a bail, and on the 25-pound pail a wooden handle is added. These tapering pails are made heavier and stronger than those with the straight sides—the covers are deeper and the top edge of the pail is doubled over, making it smooth and convenient to handle.

Samples of the **five** sizes, nested, 75 cents, by express, or the four smaller sizes, 50 cts. Prices:

To hold	1℔.	4 lbs.	7 lbs.	13 lbs.	25 lbs
Per doz.	.75	$1,25	$1.50	$2.00	$3.25
Per 100,	5.00	8 00	10 00	14 50	23 00

GLASS HONEY JARS.

THESE Jars, at the following prices, will be shipped from Cincinnati, O.

1 lb., common glass, per gross	$ 5 00
2 lb., " " " "	6 50
1 lb., flint glass, per gross	6 00
2 lb., " " " "	7 50
Corks for same, per gross	75
Tin Foil Caps for same, per gross	80
Labels for same, per gross	75

LONG RUBBER GLOVES.

FOR SIZE, lay the open hand, palm down, on a sheet of paper, and mark the outline of hand and fingers with a pencil. Price, by mail, $1.75.

WOODEN PAILS for HONEY.

WOODEN water pails, well-painted outside, with 3 iron hoops and a tight-fitting wood cover, at $2.25 per dozen. They will hold 25 lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

HONEY KNIVES.

IN using Bingham & Hetherington's Honey Knives only the thin, sharp, beveled edge rests on the combs, and the caps, after being cut off, slide up in large sheets and roll over on the knife, like shavings on a plane. They are 2-in. wide, tempered and finished like a razor, and will last a life-time.

Price, $1. By mail, $1.15.

Muth's Honey Knife, 50c.; by mail 65c.

BEES AND QUEENS.

FULL Colonies of Italian Bees, in Langstroth hives, bred to highest standard of excellence for all the best points, $8.00. Tested Queens, $2.00.

WIRING TOOL

FOR pressing foundation into wired frames—15 cents; by mail, 20 cts.

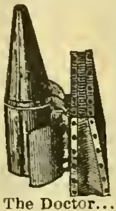
WIRE NAILS.

FOR nailing Sections, Cases, Frames, Racks, Crates, etc. The entire length of the nail being the same thickness, they do not loosen as ordinary iron nails will, and are not as liable to bend or break.

⅜ inch long,	wire No.	20,	per lb.	22c
½ "	"	19,	"	17c
⅝ "	"	18,	"	14c
¾ "	"	18,	"	13c
⅞ "	"	17,	"	11c
1 "	"	17,	"	11c
1¼ "	"	16,	"	10c
1½ "	"	16,	"	10c
2 "	"	15,	"	9c

If wanted by mail, add 18 cts. per lb. for postage. We can furnish larger nails, up to 5-in. long, when desired.

BINGHAM SMOKERS.



THIS is the first and only bellows Smoker ever made which would burn stove-wood. It burns any thing combustible, and needs no care except to be re-filled once in one or two hours. It works easily, and will throw a stream of smoke ten feet. It will not go out nor wear out. It will save time, stings and money.

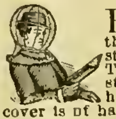
The Doctor	3½ inch,	$2 00
The Conqueror	3 "	1 75
Large, wide shield	2½ "	1 50
Extra Stand, wide shield	2 "	1 25
Plain Standard, nar. sh.	2 "	1 00
Little Wonder, wide sh.	1¾ "	65

Wholesale Rates, on application.

SEEDS for HONEY PLANTS.

White Clover—per bushel (60 ℔s)	$15 00
" " per peck. (15 lbs)	4 00
" " per pound	30
Melilot Clover—per bushel	$10 00
" " per peck	2 75
" " per pound	20
Alsike Clover—per bushel	$12 00
" " per peck	3 25
" " per pound	25
Bokhara Clover, imported, per lb	50
Mignonette—per oz., 20c.—per lb	2 00
Catnip—per oz., 10c.—per lb.	1 00
Motherwort—per oz., 10c.—per lb	1 00
Spider Plant—per oz, 20c.—per lb	2 00
Cleome—Rocky Mountain Bee-Plant—per oz., 15c.—per lb.	1 25
Figwort—or the Simpson Honey Plant—per oz., 20c.—per lb.	2 00

NEW BEE VEIL.



HAS 5 cross bars *riveted* through the center at the top. These button to studs on the neck-band. The bars are light spring steel; the neck-band is of hard spring *brass*; and the cover is of handsome light material. It is very easily put together—no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. It protects against mosquitoes, flies, bees, gnats, etc. The Veil weighs only 5 oz. Price $1.00.

GUMMED HONEY LABELS.

OF these we have 20 styles, and when ordered in quantities of 250, 500 or 1,000, we print the name and address of the apiarist. Prices range from 25 cents for 250, and upwards. Samples sent upon application.

MISCELLANEOUS.

Little Detective Scales, weigh 25℔ $2.50

Honey Gates for Extractors, 75c.

Gearing for Honey Extractors, $1.50.

Handles for Honey Gates, 25c; mail 40c

Novice's Metal Corners, per 100, 50c.

Wire Cloth, painted, 14 mesh, 8c. sq. ft.
" tinned, for Qu. cages, 12c. "
" " for extractors, 15c. "

Glass, 5x6 in., 240 lights in a box, $2.50.
Glass for shipping crates, per 100 lights
2¾x13½, for one-℔. sections, $2.50.
3⅜x16½, for two-℔. sections, $3.50

Whitman's Fountain Pump, $8.

Wire (for fdn.) oz. spools, 4c.; mail 6c
" " 1 ℔. spools, 40c.; mail 58c

Novice's Iron Blocks, for making his metal-corner frames, 15c; mail 25c

Queen Registering Cards, 10c. per doz.

Scissors, for cutting queen's wing, 50c

Ribbon Badges, 10c.; 100 for $8.00.
" rosette and gold lace, 50c

Rubber Sprinkler, $1.00; by mail, $1.10

Parker's Foundation Fastener, 25 cts. by mail, 40 cents.

Bee Veil (common), by mail, 50 cents.

Metal Rabbets, per foot, 1½c.

Registering Slates, 50 for $150;—100 for $2.50. Sample, by mail, 10c.

Felt Blankets, 35c. per lb. by express.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Sept. 1, 1886. No. 35.

Railroad Rates for the round trip from Chicago to Indianapolis to attend the National Convention, are now under consideration, and we hope in our next issue to be able to state the definite amount and the method of obtaining them. The "pool" now has it under consideration. Meanwhile let every one who can do so, make arrangements to go to the Indianapolis convention. The programme will soon be issued, and all can obtain a copy by applying to the secretary, Mr. Frank L. Dougherty, at Indianapolis, Ind.

◆

The State Fair, at Chicago, will open on Monday, Sept. 6, and continue during the week. It promises to be very largely attended, and the exhibits will be more magnificent than ever. There will no doubt be a good display of honey. We hear of several bee-keepers who expect to make an exhibit, and there are many others of whom we have not heard. The editor of the AMERICAN BEE JOURNAL has been appointed one of the judges in the Bee and Honey Department. For many years past bees and honey have been unknown at our State Fair, and we are glad to see that there is to be a change this year.

The Percheron Horse Show, which is to be held under the auspices of the American Percheron Horse Breeders' Association, will be a grand exhibit. The premiums offered by the State Board of Agriculture and the Percheron Association amount to about $7,000. It is claimed that nearly 300 fine bred Percherons will be exhibited by about 50 breeders in the United States and Canada, and that in addition thereto there will be several hundred grade Percherons on exhibition. It will be an immense show in itself; and when it is remembered that all other draft horses are to be exhibited it will be seen that this will be a most noble horse exhibition.

◆

Mr. Reuben Havens, of Onarga, Ills., made an excellent exhibit of honey at the Fair at Watseka, Ills., and the Watseka *Times* notices it thus:

> One of the most interesting exhibits in the domestic department is that shown by Reuben Havens, an apiarist of considerable repute, from Onarga. The extracted honey shown in neat glass jars was so clear that some good housewives accustomed to the old methods of honey getting, seemed doubtful that this article was strictly pure, but it is. Mr. Havens has made a study of bee-keeping and handling the honey, and his honey (both extracted and in the comb) is clear and enticing to view and to palate.

English Royalty and the Bees.—The Southampton Bee and Honey Show was visited by the Princess Beatrice and Her Royal Consort, Prince Henry of Battenberg. The Princess has for some years been the honorary President of the "Hampshire and Isle of Wight Bee-Keepers' Association," and upon the occasion of her marriage last year, the Society made her an appropriate present in the form of a diamond brooch, shaped like a bee, eliciting from Her Royal Highness a graceful acknowledgement, which, no doubt, resolved itself into a ready acceptance of the invitation afterwards tendered her by the Association to come to the meeting at Southampton and distribute the prizes gained in the exhibition of bees and bee-implements.

The ancient town of Southampton was in gala attire; military display, triumphal arches, banners, flags, flowers, processions, enthusiasm and cheering being indulged in.

The Rev. E. H. Bellairs escorted the royal party, consisting of the Princess Beatrice and her husband, Prince Henry of Battenberg, through the exhibition of honey and bee-implements, and explained the uses of the latter. Her Royal Highness expressed herself extremely interested in the display of honey, particularly with the honey-comb design exhibited by a cottager named Woodley, of Newbury, consisting of the letters "H. R. H." and "P. B. B." worked in comb by the bees. Her Royal Highness compared the specimens of honey with some she had seen in the Riviera, and showed that general knowledge on this and other subjects common to the members of the Royal Family.

At the door of the tent the honorable secretary presented Mrs. Bellairs, with whom Her Royal Highness shook hands, and from whom she received a section of comb honey, framed in an elegant silver case, and also a copy of the book entitled, "Modern Bee-Keeping," an elegant volume bound in morocco. The honorable secretary then conducted the royal guests to the bee-tent, where the Rev. W. Medlicott, of Swanmore, Bishop's Waltham, gave a short lecture, pointing out how unnecessary it was to destroy the bees in order to obtain the honey, and how very much more profitable the modern methods of bee-management were as compared with the old fashioned way of keeping them merely in straw hives.

The bees were then driven from an old-fashioned straw-skep by Mr. Evan Maberly, of Christchurch, and Mrs. Bellairs, having obtained the Royal permission, then entered the arena and assisted in the driving, in order to demonstrate the facility with which women as well as men may practice the new industry—for a new industry it is as practised under the rules and recommendations of the modern bee-keepers' associations. Mr. Maberly having driven the bees into an empty skep, captured the queen, which was placed in a bottle for inspection by their Royal Highnesses, who took the greatest interest in the proceedings.

It was remarked that the Princess, in compliment to the occasion, wore as her only ornament the diamond-bee brooch presented to Her Highness by the bee-association on the occasion of her marriage.

A Royal reception and luncheon, followed by toasts, speeches, etc., was indulged in, and as all the arrangements seemed to be perfectly made, the whole affair was a magnificent success.

The distribution of prizes was conducted in this manner: The secretary called the successful competitors, who filed past the elevated dais, His Royal Highness Prince Henry putting the prizes into silk bags, bearing in gold letters "Presented by H. R. H. Princess Beatrice, 1886," handing these to the Princess, who duly presented them to the fortunate winners amid the plaudits of the visitors. When it came to the turn of Mr. Bellairs, who had succeeded in carrying off the first prize for extracted honey open to all England, the Prince and Princess cordially congratulated him with a shake of hands, and the Rev. Walter Medlicott also came in for a large share of public applause.

The band played the National air, and the Royal visitors were escorted back to the pier, where the Royal yacht awaited them, and took them back to Osborne Palace.

◆

The Bee and Honey Show of Scotland was held at Dumfries, on July 27 to 30, 1886, The weather was very cold; on the morning of the 27th it was 32° on the ground; on the 29th it rained nearly all the day, making things very disagreeable. The show was a success, owing to the energy of the honorable secretary, Major R. J. Bennett. That gentleman devotes much time and spares no expense for the purpose of helping on the working classes to better their condition by the aid of bees. The exhibits were numerous, the entries being 150. Some of them reflected great credit on the owners for their enterprise in being able to bring forward such grand displays in such an untoward season.

Mr. E. McNally, of Rutherglen, exhibited a classified display of dried and fresh flowers and plants, amounting perhaps to 1,000 specimens, including seeds of many of the same, together with the dates of their time of flowering and percentage of honey yield. The exhibit consisted of two large volumes filled with them and others mounted on card-board. These, together with the fresh flowers, nearly covered one side and end of the exhibition tent, which contrasted well with the opposite side, and its beautiful display of honey and honey-comb, tiered to a great height on graduated steps, setting it off to great advantage.

◆

The Indiana State Fair and Exposition will be held in Indianapolis during the week commencing Sept. 27, 1886. Premium Lists can be obtained of Alex. Heron, Secretary, Indianapolis,, Ind. We presume there will be a good bee and honey show, as usual. Such exhibitions are now indispensable in this "era of progress" and no enterprising farmer or mechanic can afford to remain away from the Indiana State Fair the week commencing Sept. 27. Railroad rates are now uniform for all the Western State Fairs.

◆

E. L. Goold & Co., of Brantford, Ont., have sent us samples of their varnished Honey Labels, with price-list. They are nice and very attractive.

QUERIES
AND
Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Is the Locality Overstocked?

Query, No. 298.—I have been a successful bee-keeper for seven years, and am in just an average locality. By counting mine I find there are 500 colonies of bees within a radius of 3 miles. Now I think that these bees have cut my average down one-half. Do you not think so? Would it ever be profitable with so many bees so close?—Subscriber, Ind.

I agree with "Subscriber." It would probably be much more profitable if less bees were kept.—W. Z. HUTCHINSON.

Your locality is overstocked. It is very doubtful if your bees will prove profitable, unless large areas are sowed to clover and buckwheat.—J. P. H. BROWN.

I should prefer to have fewer bee-keeping neighbors. It is possible that in very excellent seasons you would do well despite the ill surroundings.—A. J. COOK.

It is impossible in the short space alloted, to answer the question. It is one of great importance to many of us. I should think that the 500 colonies in some seasons might overstock so as to cut down the average yield of surplus, and in other seasons I think they would not.—H. R. BOARDMAN.

1. They have tended to decrease your yield without doubt. 2. Only in extra good seasons if the sale of honey is the only income from them—G. M. DOOLITTLE.

Localities differ so much that it would be impossible to give a correct answer. In my locality it would be all we should want. I have read of places where three times 500 colonies were kept, and all did well.—H. D. CUTTING.

Conundrums are always in order in this department, and this is as good as any. All answers will be theoretical, but in my opinion no difference will be found if all the 500 colonies mentioned should be moved 100 miles away. In an average locality 1,000 colonies so situated in a good season would gather as much honey individually as though there were but 100; in a poor season each would gather as little. Lest I may be accused of claiming to "know it all," I will say the above is simply a matter of opinion.—J. E. POND, JR.

You are touching upon a subject that must come prominently to the front if honey-producing is to become a permanent business. Just how much your average has been cut down depends upon your numbers. If you kept 400 and others 100 you are not cut down much by them; but if you had 100, and 400 more have been added, one-half is probably gone, and it will not pay you to stay.—C. C. MILLER.

I guess there are too many bees in your field. There are certainly too many that belong to others to make it an object for you to make the business a specialty in that location.—JAMES HEDDON.

At the time when your surplus honey season is on hand I do not "think so." I doubt if your average is cut down at all. I am in a like situation with yourself, but I was the first to try bees here, and once had practically an open field; since "my field" has been heavily stocked with bees, I obtain about the same surplus that I did before. But I believe my bees suffer loss on account of "overstocking" at such times, as there is but little honey in the fields to be gathered, to keep up breeding and to prevent shrinkage of stores.—G. W. DEMAREE.

I believe that a good white clover district as this has been the past season, under the influence of frequent rains, cannot be overstocked by 1,000 colonies of bees in one locality. We have still (Aug. 17) much clover bloom, but for the greater part of the season there never was known to be so much white clover heretofore. The bees were surfeited with nectar, and comb honey could be left for days anywhere without being molested by them. In other years 200 colonies has seemed to be too many when we had little clover. Taking one year with another, I do not think 500 colonies too many for the locality named.—G. L. TINKER.

Using Sheets of Perforated-Zinc.

Query, No. 299.—Which is the best way to use sheets of perforated zinc—with two bee-spaces, one below and one above, or only with a bee-space above the zinc?—H. S.

Either would answer.—G. M. DOOLITTLE.

With two spaces.—W. Z. HUTCHINSON.

I prefer two bee-spaces, so as to keep all the sections neat.—A. J. COOK.

I have never had any use for perforated-zinc honey-boards.—H. R. BOARDMAN.

It is best to use them with bee-space below and above.—H. D. CUTTING.

I do not know, but I think the one space may be better.—C. C. MILLER.

Either way succeeds well, but the space between the zinc and the top of the brood-frames should not be over ¼ inch.—G. L. TINKER.

Two, every time. Do not let the zinc rest against the brood-frames, nor sections, nor anything else within bee-space. All are coming to this, and do you not see it?—JAMES HEDDON.

I presume the zinc-excluders are made to suit the "make" of the hive used. As for myself I make all my hives and cases so as to have a shallow bee-space above and below the frames and sections, hence the honey-board or zinc-excluder must have the shallow space above and below its surface or plane. I much prefer this system for too many reasons to explain here.—G. W. DEMAREE.

I use single sheets. If it is meant to inquire if two sheets should be used, one above the other, I can see no good reason for so doing. If intended to ask whether the zinc should be so placed as to leave a bee-space on each side of the zinc (and which, I presume, is the intention), I should say, give such bee-space on each side, but be sure and give no more, else brace-combs will surely be built.—J. E. POND, JR.

Number of Frames in a Hive, etc.

Query, No. 300.—1. Can both black and hybrid bees come from one colony? 2. Which is best, 10-frames or 9-frames in a hive 14 inches wide inside? My hive is 14 inches wide, 12 inches high inside, and 14⅝ inches long inside. The frames I use are 11¼ inches deep, and 14 inches long outside—almost the same as the Adair frame—and I would like to know if this is as convenient as others, or if it is too short for the width and length? For extracting I use two of these hives, one for a brood-chamber and one for extracting. For comb honey I use only one.—AMANA.

See answer to Query, No. 297. For comb honey I would recommend nine frames in the hive you use.—J. P. H. BROWN.

1. If you mean as the progeny of one queen, no, although they may look like it. 2. If combs are straight, ten frames for summer and nine for winter.—C. C. MILLER.

1. Some of the bees in a "hybrid" colony are black bees, to all appearances; others show one band, and still others two or even three. 2. I should consider it too short.—W. Z. HUTCHINSON.

1. Yes, if I understand the question rightly. There are always some black bees in a hybrid colony. 2. I use nine frames in 13⅛ inches of space. I prefer the Gallup frame to all others, but this is only one of my preferences.—G. M. DOOLITTLE.

1. If the querist wishes to know if there are a few all-black bees in hybrid colonies, I answer yes. 2. If the hive must be so large, the more frames the better, provided they are spaced from centre to centre 1⅜ inches. For extracting, it matters little what the size and shape of the brood-chamber is, but for comb honey

your brood-chamber is too large, as well as too deep. One thousand square inches of comb is plenty, and only 700 in a reversible hive does remarkably well on trial.—G. L. TINKER.

1. I presume you mean to ask if the progeny of a hybrid queen can or does show a mixed lot of bees, some having the markings of black bees, and others the yellow markings common to hybrids, all from the same colony. If so, I answer yes. See answer to Query, No. 297. 2. Ten frames. Your hive would not suit me, but one will get used to any sort of frame and hive. I prefer the standard Langstroth frame, which is 17⅜x9⅛ inches.—G. W. DEMAREE.

1. Not unless the queen has been changed. In colonies that are well mixed with black bees some workers may look like good Italians. Again a very little black admixture will show in some of the bees wanting the three bands. 2. The worst feature of your frame is its oddity. The Langstroth frame is the best, as so many are in use.—A. J. COOK.

1. Yes, in color. 2. Nine frames. I find by careful inquiry, and from statistics gathered at our State conventions, that more bee-keepers use a frame nearer 10x14 inches than any other size.—H. D. CUTTING.

1. Yes. 2. Ten. Not for James. Were I going to establish a standard frame for one-story brood-chambers, I should make it 1½ inches shallower than the standard Langstroth frame now is.—JAMES HEDDON.

1. No sir! except that some of the worker progeny of an impurely mated queen may be found as black as are any black bees. 2. If it is desired to devote the lower story to brood entirely, ten frames should be used, spaced just bee-space apart. If it is desired to have stores placed below as well as brood, use nine frames. So far as frames are concerned, I prefer the Langstroth frame; others, deeper frames. The rule is, I take it, that the frame one is accustomed to, will be the one he prefers.—J. E. POND, JR.

Convention Notices.

☞ The Iowa State Bee-Keepers' Association will meet on the Fair Grounds in Des Moines, on Tuesday, Sept. 7, 1886, at 2 p.m., continuing in session during that and the following two or three days. A large and substantial tent has been secured and is now at hand for the use of the society. Any or all of the 6,000 bee-keepers of Iowa are urgently requested to be present and help make the meeting a pleasant and profitable one.

A. J. NORRIS, *Sec.*

O. O. POPPLETON, *Pres.*

☞ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.

E. T. ABBOTT, *Sec.*

☞ The N. W. Ills. & S. W. Wis. Bee-Keepers' Association will hold its next meeting at the residence of F. D. McKibben, 1½ miles east of Dakota, on the Milwaukee & St. Paul R. R., on Tuesday, Sept. 7, 1886. JONATHAN STEWART, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, *Sec.*

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest; O¬ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Sting Structure of the Bee.

WM. F. CLARKE.

Man is a creature of extremes. When I announced the hibernation theory I did it with too great a flourish of trumpets. On making known another discovery of mine in the realm of apiculture, I went to the opposite extreme, and was too modest. I refer to the functions performed by the sting of the bee. I broached this matter at the Detroit Convention, and did it in such a way that some thought it was a "scientific pleasantry." How strange it is that when one man gets off a "scientific pleasantry" it is forthwith echoed through the land as a truth, although it carries the stamp of absurdity on the face of it; while if another man propounds a truth, well-nigh self-evident, it is taken as a joke! At the Rochester meeting of the New York State bee-keepers in February last, Mr. Isham and others congratulated me on having made a most important hit. This astonished me, for I had begun to think that I should not be permitted to "diskiver" anything. Having been recently ousted from the paternity of the hibernation theory by the last man in the world whom I expected to find ahead of me in propounding that theory, viz: Prof. Cook. I must hang on to the only rag and shred of discovery that is left me, or I shall be nothing but a "full private" in the great army of bee-keepers!

But, joking apart, I became satisfied from observations made last summer, and repeated during the present season, that the most important function of the bee's sting is *not* stinging. It had often seemed to me that to get up such an elaborate and exquisite piece of machinery merely for the purpose of inflicting a wound was hardly harmonious with the economy of nature. Waste of appliance is never to be found in the material world, and if only stinging had been meant to be done by the stinging apparatus of the bee, I do not see why it need have been more complicated than the proboscis of a mosquito, or the ovipositor of a gall-fly. If you examine the sting structure of a bee as represented in a good engraving which shows it magnified about thirty times, and study it closely, even with unscientific eye, as I confess mine is, you cannot help feeling that there is an extravagance of complexity and delicacy in construction altogether inexplicable on the supposition that the sole function of this beautiful piece of machinery is that of a weapon of attack and defense.

My observations and reflections have convinced me that the most important office of the bee-sting is that which is performed in doing the artistic cell-work, capping the comb, and infusing the formic acid by means of which honey receives its keeping qualities. As I said at Detroit, the sting is really a skillfully contrived little trowel with which the bee finishes off and caps the cells when they are filled brimful of honey. This explains why honey extracted before it is capped over does not keep well. The formic acid has not been injected into it. This is done in the very act of putting the last touches on the cell-work. As the little pliant trowel is worked to and fro with such dexterity, the darts, of which there are two, pierce the plastic cell surface and leave in the nectar beneath it tiny drops of the fluid which makes it keep well. This is the "art preservative" of honey. A most wonderful provision of nature truly! Herein we see that the sting and poison-bag with which so many of us would like to dispense, are essential to the storage of our coveted product, and that without them the beautiful comb honey of commerce would be *non est.*

If these things are so, how mistaken those people are who suppose that a bee is, like the Prince of Evil, always going about prowling in search of a victim! The fact is that the bee attends to its business very diligently, and has no time to waste in picking unnecessary quarrels. A bee is like a farmer working with a fork in his hay-field. He is fully occupied and very busy. If molested or meddled with, he will be very apt to defend himself with the implement he is working with. This is what the bee does, and man by means of his knowledge of the nature and habits of this wondrous little insect, is enabled, in most cases, to ward off or evade attack. It is proof of their natural quietness, industry and peaceableness, that so many thousands of them will go through a summer of of ceaseless activity close to your dwelling house, and perhaps not half a dozen stings be inflicted during a whole season.

Since the above was written, I have re-read Cheshire's chapter on the stinging apparatus, which, in common with all other works on the structure of the bee, recognizes no other use for the sting than that of inflicting a wound. But how perfectly suited it is for that other purpose for which I feel sure it is mainly intended. I am especially struck with the adaptation of that pair of very beautiful organs called *palpi*, supposed to be feelers by means of which the bee examines the nature of the surface to be punctured. I do not think there is this preliminary examination in stinging. It is done in a flash, and when bees are angry, they are not particular what substance they run a muck at. They will sting an iron pot as quickly as any softer article. These organs are shaped very much like the brush of a well-tailed fox, and I believe that the process of cell-finishing is performed very much as a plasterer finishes a smooth wall, alternately using both trowel and brush. In a similar manner the bee alternately uses the sting and *palpi*.

" How skillfully she builds her cell,
How neat she spreads her wax !"

Guelph, Ont.

For the American Bee Journal.

Building Drone-Comb—Feeding Sugar.

W. Z. HUTCHINSON.

Mr. Mitchell now says, on page 523, that he did not mean that he waited 6 or 7 days after hiving before he put on supers, but rather that the bees swarmed out because he did not give them room enough, and he then gave them more room in *the brood-chamber;* and at the sixth or seventh day, as he went to put on more supers, he then found them building drone-comb in the brood-chamber. At least, this is how I now understand Mr. M.; if I am wrong I wish to be set right.

When he gave them more room in the brood-chamber, does he not see that he thereby brings about a condition conducive to drone-comb building, viz: a large brood-chamber which enables them to store honey therein ? and if honey was coming in such a flood that some colonies stored 120 pounds of surplus before July 10, it is no wonder that they built drone-comb in which to store it.

He says that he cannot conceive how my system destroys all wish and instinct of the bees to build any more drone-comb. The *desire* to build drone-comb ceases when the swarm issues, and if they build drone-comb immediately after swarming it is because they are gathering honey rapidly and must build comb in which to store it; or because the queen is so old that she will soon be superseded. Mr. M. says he will " try once more." Good. If he finds it necessary to give the bees more room, in order to make them contented, let him try giving it in the *surplus apartment.*

Mr. M. says: " I have many colonies that were given foundation that have about honey enough to winter on, and those that had to build their combs are starving." It is quite evident that there is a difference somewhere in the management or locality, or he could not report exactly opposite results from myself. When I use no foundation in the brood-nest, I secure much the most honey in the supers, while the brood-chamber is nearly free from honey, as compared with the brood-nest of the swarm that is furnished with foundation. The honey thus secured in the supers is sold for at least twice what it will cost to replace it with sugar. One season I secured more honey in the aggregate (*i. e.,* counting that in both the supers and brood-nests) from the colonies that built their own combs in the brood-nest.

I do not consider it so very " hard to have to turn around and buy sugar for 100 colonies run on six frames all summer," when this condition of the brood chambers is the result of having squeezed all the honey into the sections, in which shape it can be sold for twice what it costs to replace it with sugar. This course may put down the price of honey, but it also puts down its cost, and helps us to successfully winter our bees; and as for making millionnaires of our sugar merchants, I see no reason why this will injure bee-keepers or any one else.

Rogersville,♂ Mich.

For the American Bee Journal.

Feeding Bees—Removing Surplus.

J. H. ANDRE.

Last season I gave a description of how I fed my bees for the purpose of building up weak colonies, or in order to get the brood-chamber well filled with brood. Since that time I have made some improvements over the style of feeder then used, and as it suits me the best of any arrangement for feeding in moderate weather that I have seen mentioned, perhaps it may please some others also.

To make the feeder, use lumber ⅜ of an inch thick for the sides of the box; cut one piece 2 inches longer than the other three, and nail them together in a manner that will leave the box square inside; this will give a projection of one piece at two of the corners of one inch. The side pieces will need to be 2 inches wide. Fasten on the bottom with screws or in a way that it may be easily taken off. In the side of the box which has the long piece, bore an inch hole, or a piece may be sawn out nearly to the bottom. Cut a neat piece of comb that fills the box, or two or more pieces if well matched together. Nail a piece of wire-cloth with meshes just small enough to keep the bees from getting out on the top of the box. Bore a hole in the back side of the hive, place the box against the side of the hive with the hole to correspond with the one in the hive, and fasten with screws through the piece on the side that projects by the corners. The cover should be somewhat larger than the box, and fit fairly well, and well cleated on top to keep it from warping.

In using this feeder pour the feed through the wire cloth, taking care not to run the comb over and let it drip through the bottom of the box, as it might create a desire to rob. The idea of putting on the bottom so that it may be easily taken off, is for the purpose of removing the comb when one is through feeding, for unless extra care is taken it would go to feed the worms before wanted again.

This method of feeding will not answer for cold weather or in chaff hives, but for single-walled hives of any description, box or frame, I want nothing better in moderate weather, as one can see and tell just what he is doing; can feed at any time of the day without any danger of being stung, and, if careful, without any robbing. An ordinary tea-pot with crooked spout answers best with which to pour the feed in.

I notice that some advise taking out the full sections from the cases as soon as a few are filled, and replacing them with those containing foundation. This may do if separators are used, but the majority of bee-keepers at the present time are not using separators with the one-pound sections, and if their experience is the same as mine, they will find in nearly every instance where a section containing foundation is placed beside one nearly full, that the honey in the full one will be carried out into the empty one; and if one is placed between two, it insures a very thin comb, making it bad to take to market unless one is careful and places them in the same position in the crate that they were in the case.

In taking off surplus I take case and all, and those sections that are nearly full I put together; those that are only half full I put in another part of the case, and fill out the case with empty ones, which is put on when I take off the next one. It does not irritate the bees so much, is just as well done (in fact very much better unless one takes time to fix them when removing the sections), and it is a great deal more quickly accomplished.

Lockwood,♀ N. Y.

For the American Bee Journal.

Coffee for Curing Foul Brood.

J. DENNLER.

With each spring we have here and there foul brood showing itself. Like a black and hideous spectre this the worst of all diseases amongst bees, from time to time makes its appearance. It brings death and destruction to many an apiary, and gives to the apiarist much trouble, and often, loss.

The nature of this disease is well known, and of late has been sufficiently written about not to require repeating here. As to the remedy, however, opinions vary very much, some recommend salcylic acid, carbol acid, or camphor, etc., and will be certain of good results. On the other hand a great number doubt the quiet disappearance of the disease, and only advocate the entire destruction of the colony as the only proven remedy for saving the remaining colonies. If it were permissible to make a statement here we would like to make the following: The former have operated in good, the latter in poor honey seasons. *In good honey seasons the disease disappears of itself.*

The opinion that we advance, that heretofore nature has been the active combater of foul brood, is shared by many experienced bee-keepers. Records prove this, and we will refer to them hereafter. Lehzen wrote some years ago in *Centralblatt* that in certain localities in North Germany foul brood appeared from time to time, but also again disappeared. If this latter were not the case as Lehzen affirms, nature would not be able to battle with this great pest; yes, more, this creature, the bee, would long have disappeared from the face of the earth. After all this we therefore stand aside from nature, pretty helpless as to foul brood, and therefore the more welcome must be the following communicatiom by Herr Wust, of St. Amarin (Oberelsasz), on

"COFFEE AS AN ANTISEPTIC."

On Sept. 1, 1885, at the general assembly in Colmer, all the remedies for the cure of foul brood in general. were too impracticable, too expensive, too uncertain, and only flames and fire were left as a radical remedy to be recommended to the practical. I consoled myself with the hope, that our men of science would yet succeed in finding a remedy. As it appears to me now it had already been found on Alsacian ground through first staff physician, Dr. Oppler, in Strasburg, a remedy convenient in every home; in short, coffee roasted and ground to a fine powder.

In the December number *Deutchen Militararsztlichen Zeitschrift* will be found several uses and experiments with coffee as an "antiseptic," which were conducted with blood, glue and flesh, such substances as will easily mix with coffee. In a glass 10 g. of blood and 1 g. of coffee powder were well mixed, and in a temperature of 16° there was for two days no perceptible odor. The prepared blood, which had become putrid, was mixed in a rain-glass with 1 g. of coffee powder, and well shaken, which then in half a minute before ceasing the shaking had become odorless, and remained so for 1½ days. Ten g. of a foul smelling solution of glue was mixed with ½ g. of coffee powder; in one-half minute it became odorless, and continued to be so for 20 days, in spite of its being in an open glass exposed to the atmosphere. Twenty-five g. of meat chopped small, impregnated with 11 g. of coffee powder resulted in the same manner. Fifty grains of meat with 9 g. of coffee powder mixed with it is, after three days, without a trace of smell, and dried so that it can be rubbed to a powder with a loss in weight of 67 per cent.

After it was proven indisputably that coffee was effectual as a preventive of decay, and also effectual to arrest putrefaction, it was next necessary to test it for this purpose for wounds. Two soldiers had, during a fall down stairs, given themselves severe wounds upon their heads. The wounds of the one were already festering; every time the wound was treated with coffee powder it became dry and coated, and the third day the man was again fit for service.

With such excellent results, the remedy was used as a weapon against bacteria in veterinary. It is well known that bacteria are the carriers of the cause of the disease foul brood. It seems hardly admissible that there should be a doubt as to the success of the bee-keeper to battle foul brood with coffee powder. The advantages are apparent to all. The remedial agent can be secured everywhere; it is cheap, can readily be applied, and is harmless in even large doses.

The best mode of applying the remedy the unfortunate apiarist will soon find out. As for myself I will dust all suspected cells or fill them. Where colonies are affected badly, dust all brood-cells, which, as they will at least thoroughly dry out, can be cleaned more readily. A very liberal application can hardly injure, so it would in such cases not hurt to dust the full and empty cells.

Quite an evident advantage lies in this, the remedy is applied dry; it soaks up all moisture, and by means of this facilitates the cleansing of the combs for the bees. Also as a preventive the addition of a little coffee to the water for bees must be a real advantage. I beg these words will be taken as they are intended—an incitation to use it as a remedial agent. It is so cheap, so simple, that it would be wrong without having tried it, to consign our pets to the flames.

Bee-keepers! coffee as a prevention of putrefaction has drawn the attention of the scientific world to it. If we follow the advice of Herr Wust, we will try this simple antiseptic whenever the appearance of foul brood offers an opportunity; it can do no harm. We will not let this question rest until we have found the remedy and are able to free ourselves of this foul pest whenever it appears, or are able to totally prevent it.

Enzheim, Germany.

For the American Bee Journal.

Pumpkin Honey.

A. J. KING.

That certain flowers in one section yield a bountiful supply of honey, while in others they yield little or none, is now a well-established fact among practical apiarists. That this is the case regarding pumpkin bloom, I am led to believe from the very meager reports respecting it, which we occasionally see in the bee-periodicals. As a matter of fact, where the proper atmospheric conditions prevail, it has very few superiors, producing a fine straw-colored nectar of excellent flavor, and very heavy body, weighing 12 pounds per gallon.

Our large apiary in Cuba was surrounded on two sides by a corn field of eight or ten acres, in which pumpkin seeds had been "stuck" in every third or fourth hill, producing vines which completely covered the ground. During the month of February we took five tierces (6,000 pounds) of honey from these blossoms alone.

At the base of the blossom surrounding the projecting centre, are three little openings equally distant apart, leading to a little circular cavity containing the nectar. I have frequently observed three or four bees on a single blossom, each with its little tongue thrust into these openings and "pumping" away for "dear life." The yield of pumpkins was the largest and finest I saw on the island, which, I infer, was due to the frequent fertilizations performed by the bees.

Botanists tell us that the nectar secreted by the flowers, contributes in no way to their beauty or the growth of the stalk, but simply attracts honey-loving insects which, in flying from bloom to bloom, carry with them on their hairy bodies the pollen which cross-fertilizes all the blossoms they enter, and produces fruit, perfect in flavor, large in quantity, and beautiful to the eye. If fruit-growers and flower-gardeners would more fully recognize this beautiful provision of an all-wise Providence, the world would be greatly benefited and beautified.

New York, N. Y.

For the American Bee Journal.

A Chapter of Lamentations.

JOE KING.

When I read Dr. Miller's proposition, on page 44, to hire out to the editor of the BEE JOURNAL at a salary, to look up and report the failures in bee-keeping, so that we might have the failures as well as the successes, it struck me very favorably, and I thought of applying for the second appointment, for it seemed to me that I had experiences to qualify me to understand that side of the question, as I have been keeping bees for 12 or 15 years, and my even tolerable yields of honey were always in next year's expectations; but if I did not produce what I wanted to eat, I could buy it at the grocery, and I was contented and happy.

But in an evil hour something put it into my head to subscribe for the AMERICAN BEE JOURNAL, and I did, but then was where I made a mistake; for last fall I put my bees into the cellar as directed, leaving the caps on the summer stands, and nothing over the brood-frames but a piece of burlap. I put a thermometer and a stove into the cellar and used to watch the bees so comfortably tucked up in their little beds. I put them out in the forepart of April, and I thought I had "done it."

All seemed to work nicely till the white clover bloomed, and then the eternal hum of those bees seemed to be "more section cases," "more sections," "more room," all the time. Talk of your 8 hours for labor, 8 hours for improvement, and 8 hours for sleep, why, sir, I worked 18 hours out of 24, and then could not keep up; work all the time, only to fall asleep to dream of bees buzzing around my ears; no picnics, no Fourth of Julys, no Sundays, but work all the time!

Well, there came a time when the honey had to be taken off, and the question was, what to do with it. I piled it up in the porch until the floor began to bend under the weight, and I found it would all be down in a mash. I then piled it up in the chamber over our bed-room until we feared it would break down in the night and kill us; and "down on us came our neighbors, a couple of dozen strong, and lent their kindest service to help the thing along;" and they bought fifty cents, one dollar, two dollars, three dollars, four dollars, and some even five dollars worth, and all paid in silver—and then what to do with that! If I put it in the bank it might break; if I carried it in my pockets it would soon wear them out; and, besides, there was danger of burglars breaking in at night and stealing it, and I tried to keep awake to watch it, but my system being full of that bee-poison, it made me so nervous that I could not keep awake even to read the Bee Journal after 9 o'clock.

So in the agony of my spirit I cried, "Away with your new-fangled notions! Let me return to the practice of my fathers, when we used to hoe corn until the old tin horn blew, and then we all rushed to the house, and we boys beat on tin pans until we got the bees to alight somewhere, provided they did not go off to the timber; and father hunted up a board and made a box, not forgetting to put in the cross-sticks to keep the comb from breaking down. Then the table was brought out, a sheet spread on it, and after the hive was washed out with salt and water, and rubbed on the inside with bee-balm, the bees were put into it, and they staid just as contentedly as bees do with all your gim-cracks. Then in the fall when we wanted honey we killed the bees with brimstone. But, alas, the bees have abolished the 'brimstone' theory altogether, have spoiled Sunday, and soon all the old landmarks will be gone, and like Hofed in his dream, we will be groping around in a world of chance."

P. S.—I do not consider the above lamentation worthy of publication, but if the editor thinks best he could send it to that man Andre of New York, to help him out with *his* lamentations, given on page 453.

Marshalltown,⊙Iowa, Aug. 23, 1886.

For the American Bee Journal.

Pleurisy-Root as a Honey-Plant.

JAMES HEDDON.

While the subject of honey-plants is being discussed, I wish to add my mite by describing a plant that grows wild here, and also in some other localities, I think. It is called pleurisy-root (*Asclepias tuberosa*), and is the plant I described in *Gleanings* some time ago. Still another year's observation of this rapidly increasing honey-plant makes me think that it is not excelled by any other known to bee-keepers.

If there is any plant that will pay for giving the full control of land, I think it is this. I believe that all of my students that have watched it during the last three years, will concur in this belief. I would rather have one acre of it than at least three acres of Melilotus alba. I discovered the first specimen of it four years ago, and was attracted toward it by seeing it "covered with bees," a sight that always may be seen when it is in bloom, and cold, or excessive raining does not prevent. Its rapid increase during the past four summers, from an isolated plant here and there to thousands of them at this time, and no more robbing after basswood, is as wonderful as gratifying. I account for this marvelous increase mainly from the favorable habits of the plant, and to some extent from the perfect fertilization secured by the bees of my apiary. All know that Darwin tells us that "the more flowers, the more bees; the more bees the more seeds; the more seeds the more flowers." This is not only a well established fact, but one for which we may be glad.

The plant is a perennial, the root living on till it dies of old age. The top dies yearly, but always re-appears in due time. It blooms quite variedly, the first appearing about the middle of the basswood bloom, and the last leaving about the middle of August. It is at its height, just in the right time to fill the break that occurs between basswood and the August flowers in this latitude.

Among other valuable qualities possessed by this plant, are the following:

1. It has no thorns, and cannot become an obnoxious weed.

2. Its honey is of the finest quality, both in color and flavor.

3. The plant is extremely hardy, readily asserting supremacy among weeds and grasses, and even in a matted sod it grows luxuriantly.

4. It bears extremes of wet or dry weather better than any plant I have ever seen; not only looking bright, but continually yielding honey through these extremes. Bees work on it in the rain, and in our past excessive drouth it never stopped its secretion.

5. Each seed has a balloon, which insures a broader dissemination of the plants in all waste places. By means of the draft made by railroad trains, our land along the railroad track is strewn with it.

Bees never neglect this plant for basswood or any other blossoms, but are always found upon it in numbers that must certainly overstock it in this locality. In two instances my students have found plants in isolated places that had been overlooked by the bees—once in basswood time, and this morning during the buckwheat bloom, and in each case the drops of white nectar are exuding from the nectaries.

I have several times examined basswood blossoms when they were yielding bountifully, and could never see the nectar in the blossoms to the extent that I find it in the pleurisy-root.

So far as I can yet discover, this plant has but one objection, as I do not find any specimens of it on our rich prairie soils. It seems to delight in poor soil, and no old, sandy, worn-out field is too poor for it. To just what latitude it properly belongs, and what is the best time and manner to sow the seed I do not yet know. Whether it will succeed well on heavy soils is a matter for trial.

I send a specimen, and as I put it in with this article, little drops of honey are sparkling in every blossom; but where that honey will be when it reaches the Bee Journal office, the editor can tell us.

Dowagiac,♀ Mich.

[The "sparkling honey drops" were in the blossom when it came to us, looking like so many tiny diamonds. Sometime or other bee-keepers will "come up" to the idea we have so often advanced, concerning their duty to plant for bee-pasturage, and when that time comes, pleurisy-root will, no doubt, be one of the favorites.—Ed.]

For the American Bee Journal.

Solar Wax-Extractor.

JAS. M'NEILL.

I can fully endorse Mr. Demaree's opinion of the solar wax-extractor, as given on page 501. I have used one for the past two seasons, and no implement about the apiary has afforded me greater satisfaction. Before I had one I used sugar-barrels in which to store the cappings till I had time to melt them over a fire; but drain them as well as I might, they would drip, and drip, and continue to drip with the persistency of the Dutchman's setting hen, till my ingenuity and tin-pans would be exhausted in my efforts to preserve my honey-house floor from pools of honey. But the solar wax-extractor has changed all this; the cappings of one day's extracting being converted on the next, into a cake of nice yellow wax of ⅛ their bulk.

The amount of honey which goes off with the wax is generally two or three times its bulk. The heat of the extractor scorched this honey, and made it unsalable, until it occurred to me to try the plan of placing a perforated tin-pan above the tray, which I had formerly used. This was made the same size as the tray, with short legs soldered on to give space for the honey and wax to flow. By this arrangement the honey is out of the heat of the sun before it is damaged, and I also think that the quality of the wax is improved for the same reason. Much less refuse, also, is swept into the receptacle with the stream of wax. The perforations must be large enough, about 3-16 of an inch, or they will become clogged with the refuse.

I blocked my extractor up at one end the first season to give the tray the proper pitch, and to have the glass at the proper angle with the sun. I also found it necessary to shift it around as the sun advanced, to get the full benefit of the sun's rays. But I have thought out and adopted a better plan to accomplish these results. It is as follows:

To two pieces of 2x4 inch stuff, three pieces of string-piece are nailed flatwise, one at each end and one in the middle, so as to make a frame the length and width of my extractor. Two of these frames are needed. Through the centres of the middle pieces a hole is bored, into which a bolt is dropped, so that these two frames revolve horizontally with the bolt as a central pivot. One of these frames is leveled on four bricks, and upon the other rests the extractor; one end being supported at any desired height by means of two strips and two thumb-screws. Two thumb-screws also hold the tray at the proper angle. I am thus enabled with very little trouble to adapt my extractor to the progress of the sun toward the west, as well as its progress toward equinox.

Hudson, N. Y.

For the American Bee Journal.

Reversed Queens, Discussions, etc.

G. W. DEMAREE.

I ought to thank Rev. Dr. M. Mahin for his kind effort to help out my new discovery of reversed queens, as evidenced by his criticism on page 521. The Doctor evidently takes me to be a novice, or at least a very superficial observer. He assumes without question that I mistook the very common practice of young queens to re-enter the cells head foremost, for the peculiar abnormality which I described, and which is not a mystery at all, because of its frequent appearance to observing students of nature. We all know that young queens frequently re-enter the cells in quest of the food left in them, and it is not improbable that they might in rare cases be entrapped by the bees sealing the adhering cap to the cell.

During the present season I have had a great number of queens hatched in a queen-nursery, where the bees do not have access to the cells, and here is where I made the first discovery. I have seen and examined four queens in all, which were reversed in the cells. One of them was yet in the pupa state, when I discovered her. If I had any doubts about the matter before, there could be none whatever in this case.

I shall not insist on the Doctor accepting as a fact something that he has not seen with his own eyes; but I am reminded of a case in point, which took place some years ago. The editor of the defunct *American Bee-Keeper* denied positively that there was any such thing as fertile (laying) workers, and gave as a reason that he had never seen one. Mr. Thomas replied that the editor, Mr. Harrison, had never seen his own brains, and by parity of reason he had none.

Of course I do not apply the above illustration to Dr. Mahin, as I need nothing more than his articles published in the bee-periodicals from time to time to judge of his ability, but the illustration may serve to make most of us a little cautious as to how we deny any and every thing because we have not seen them with our own eyes, and because they seem to be improbable to us.

Who is "Justice Fairman," of Louisville, Ky., whose article appeared on page 519? I have a large acquaintance with prominent bee-men in Kentucky, and ought to know something about the well-posted bee-men of the State, but for all this I never before heard of Justice Fairman as authority on bees and hives. I suspect that he writes under a *nom de plume*. Whatever may be the facts, his attack on me on page 519 is not devoid of good reading, since he has quoted so extensively from my articles.

The fact that Mr. J. M. Shuck's patent hive, which embraces the features about which I wrote, and to which Mr. Fairman (?) takes exceptions, antedates any other *patent* hive which embraces the same features, was sufficient reason for my making mention of Shuck's hive, and no other. The fact that the patent-office authorities have issued patents on more than one hive embracing this feature, shows clearly that they did not intend to cover that feature by patent.

There is a wide difference between giving "honor to whom honor is due," and the disgusting servile toadyism so prominent in much of our modern bee-literature. It has come to pass in these days that no man can write a practical article on any subject pertaining to hives or apiarian implements without having some sore-headed patent-hive man (or his henchmen) pounce on him with their slurs and insinuations. I wish here to enter my protest against the "advertising" of bee-hives, etc., which fills the reading columns of the bee-periodicals to the exclusion of other matter of interest to all. It is an imposition upon the proprietors of the papers, and on those who patronize them. And when I say that, the sooner the whole thing is "shut off" the better for all concerned, I believe I speak the sentiments of a large majority of bee-men generally.

Christiansburg, Ky.

[True, Bro. D., but have you not done as much as any one to continue the discussions which brought such "advertising" into the reading columns? Your pen has been "dipped in gall" about as often as any one's, but your articles are so "vigorous" and "interesting" that we like to read them, even if we are obliged to "pull out an occasional sting," or allow a reply which smacks of "advertising in the reading columns," against which you now so vigorously *protest!* We have been obliged to *shut down* on many subjects in our columns, simply because of this tendency and the running of one subject so persistently as to disgust our readers; and had we not done so there is no telling to what lengths our correspondents would have gone.

Now let *all* try to write on subjects for the purpose of bringing out their true merits, and not simply to combat something which has been before stated. Here is a "lesson" which ought to be learned, and what a "grand improvement" in bee-literature would be the result? Bro. D.: Will you please "second the motion," and thus set the example?—Ed.]

Florida Dispatch.

Bee-Enemies in Florida.

In the whole list of enemies of the honey-bee in this State, which list is a long one, probably the dragon-fly, bee-hawk or devil's darning-needle (*Libellulæ*), as it is variously called, is the most destructive. It is a four-winged fly, puts in an appearance towards evening, and continues its work until dark. Here they make their first appearance in large numbers during March, and continue so until late in May, when they largely disappear, but sometimes become quite plentiful for awhile again in the fall. They are voracious eaters, and if they confined themselves strictly to a honey-bee diet, it would surely interfere very seriously with apiculture here. Being gross feeders, however, their diet consists of quite a long list of insects, many of which are classed among the destructive or annoying ones, like the mosquito, of which it is very fond, and will catch and eat by the dozens every evening, when they are plenty. That they destroy a great many bees is without question, but still I do not think that their depredations would interfere seriously with success in bee-keeping, if it were not that some seasons they catch many queens when out to mate, and even in this they are not as destructive as one would expect, who saw them swarming about the apiary.

Mr. A. J. Smith, a skillful bee-keeper, and a reliable man, tells me that out of fifty young queens reared this season during the visits of the mosquito hawks, forty-five were fertilized, and are now doing duty in prosperous colonies. I have kept a less strict account of my own queens, but I think the record would run about the same, and would compare well with that of other sections of the United States, all having their particular bee-enemies and suffering more or less loss from their depredations.

The loss of workers by mosquito hawks is apt to be alarming to the novice at bee-keeping, and is quite serious where there are but two or three colonies kept. In large apiaries little effect can be seen, as the bees are breeding heavily at this time of year, and one or two good colonies will produce daily more bees than are killed by all the enemies combined. A mere handful of bees with a good queen will rapidly build up to a good strong colony in the spring, notwithstanding the most plentiful visits to the apiary of this fierce enemy.

The only remedy that I have learned of so far for these pests, is to thresh them down with switches while flying thickly before the hives at evening. It is claimed that this will frighten away to a great extent those that are not killed at once. Those who wish can try this, but I have seldom resorted to it as I have so far been able to succeed satisfactorily at bee-keeping without it.

Next in order, in degree of destructiveness, is the large red or warrior ant. These ants live in decayed wood or under old stumps or piles of trash, and are usually plenty among palmetto trees. They live in large colonies, and will sometimes make a raid upon a luckless colony of bees in the evening, and entirely destroy them by morning.

Remedies: Clean up the ground thoroughly about your apiary, leaving neither stump, rotten root, hollow tree or piles of rubbish, for them to nest in. Then, after dark, walk through the apiary, and if the ants are at work on any colony it can be easily known by the sounds given out by the harrassed bees. When discovered, get a light and follow their line of march back to their nest and destroy it, killing as many of its occupants as possible. After they are once cleared out of a neighborhood, and the ground cleaned up, they are not apt to return in any quantities. I bave never lost a colony of bees by these depredators, but some of my neighbors, located on lands more favorable to their multiplication, have only succeeded in overcoming them after suffering considerable loss. While starting an apiary and getting the grounds in shape, probably as good a way as any is to make a stand for each hive, or one for every two hives. but there are great advantages in having your hives rest either upon the ground with short pieces of board at the front and back for it to rest upon, or else to have it near enough so that an alighting-board reaching from the ground to the entrance can be used. Stands of all kinds and contrivances for keeping ants away from the hives while they still swarm upon the ground about them, are nuisances and should be discarded as soon as possible.

Other and smaller ants are often seen about the hives, and sometimes along the edges under the cover, but none of them do any harm worth noting, as they are only at work on dead or crippled bees that have been crushed, or those thrown out by the other bees. The white ants, termites, or wood-lice as they are called, are apt to eat the cleats under the hives, so that they need renewing occasionally, but they do not trouble the bees in any way.

One more item in connection with ants that I nearly forgot to mention, is the inclination of some of the smaller varieties to attack queens and their attendants while caged for shipping through the mails. Southern queen-rearers use a fine brass wire-netting over their cages, with meshes so close that the ants cannot get through; but it is always a safe plan to keep all caged queens, after received or before shipment, on a stand surrounded with water, or in some other way safely protected from their enemies.

Local Convention Directory.

1886. *Time and place of Meeting.*

Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Sept. 6.—N. W. Ills. & S. W. Wis., at Dakota, Wis.
Jonathan Stewart, Sec., Rock City, Ills.

Sept. 7.—Iowa State, at Des Moines, Iowa.
A. J. Norris, Sec., Cedar Falls, Iowa.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Western Fair in Canada.—Wm. H. Weston, London, Ont., on Aug. 23, 1886, writes:

The Western Fair, which is usually held at London, Ont., will open on Sept. 27 and close on Oct. 2, 1886. The prize list of the bee and honey department is quite liberal. In 1883 the amount given in prizes was $11; this year it has reached $115. We are anxious to have as many as possible of our friends from "over the lines" exhibit with us, which will be of mutual benefit, no doubt. Arrangements have been made with the Custom Department to admit from the United States, free of duty, all live stock or articles intended for exhibition purposes only, by giving the customary bond. All bee-keepers who may wish to exhibit can obtain a prize list with blank forms, etc., by sending a postal card to me, or to the Secretary of the Fair, Mr. Geo. McBroom, at London, Ontario, Canada. Rates will be reduced on the different lines of railroad during the Fair.

Bees did Nobly.—H. M. Parker, Plymouth, ♁ Ohio, on Aug. 23, 1886, writes:

My bees up to July 1 did nobly, every colony giving me from 50 to 75 well filled 1-pound sections. I practiced tiering up. When I saw the bees had the first case of sections partly filled, I raised it and placed a new case of sections under it. I tiered them up three cases high before removing any honey. My bees did not swarm until this month, and then there were only a very few swarms. I have one colony that swarms every eight or ten days. Of course I cut out all queen-cells and put them back. By going through the hive every five or six days, and cutting out the queen-cells, I can keep them from swarming; this I have done a few times. but as I rather enjoy hiving them I usually let them swarm. Just what the matter is with them I cannot tell, but I presume they have the "fever." To-day my bees are booming again, they come in heavily laden, working on goldenrod and buckwheat. Should this weather last a week or so I shall be able to render a good report this year.

Value of Swarm-Catchers.—J. W. Bailey, Ripon, o+ Wis., on Aug. 23, 1886, writes:

On page 499 I notice that Mr. C. C. Richardson, of Tipton, Ind., has been sued for keeping an apiary, and his bees are considered a nuisance. The complainant says that the bees cluster upon his trees, etc. I do not wish to criticize a bee-keeper too closely, but had Mr. Richardson used a good swarm-catcher he would have avoided all this trouble; and the money he will pay out for defense would have bought "catchers" enough to have lasted him a thousand years. But hold! neither I nor any one else who have used such things, need speak in their praise, or we might be considered by those who keep bees, as having "an ax to grind."

Taking off Comb Honey.—A. H. Baer, Sterling, +o Ills., on Aug. 24, 1886, says:

I have harvested a crop of over 4,000 pounds of comb honey in sections. Yesterday I alone took from the hives 1,500 pounds.

Carniolan Bees, Separators, etc.—6—F. J. Crowley, (40), Batavia, +o N. Y., writes:

This superior race has already been fully described by Mr. Frank Benton, on page 454; but as some who claim to be experts in bee-matters are forming the delusive idea that the Carniolan bees are idlers, and undiscernible from native bees, I wish to give my testimony to the contrary. I find that they excel Italians, Syrians, Cyprians, or any other foreign race known at the present time. My bees are reared from imported mothers, shipped direct from their native land. I have Italians, Carniolans, and a cross between these races, but I find the Carniolan the best, with the cross closely following. I also obtained one tested and one untested Italian queen from a breeder last year, which I find are as good as any Italians I have, even the imported ones; but let me ask, why does any breeder defend the

Italians, and run down the Carniolans? Simply because he has not fully tested the Carniolan bees, or he has a trade established in Italians. Hear what Frank Benton says on the introduction of Carniolans: "The demand for them far exceeds that of the Italians in every land, save perhaps Australia, and there they have been rather successful in importing Italians from Italy, but seem to be changing slowly in favor of Cyprians. In England, Ireland and Scotland the trade is mostly Carniolans and Cyprians; Norway and Sweden, Syrians and Italians; United States, Carniolan and Cyprians. Our trade shows the Italians to be decreasing." Among those who have imported Carniolans, and say they are the best bees of to-day, I may mention S. W. Morrison, M. D., G. L. Tinker, M. D., H. F. Shannon, J. B. Mason, and D. A. Jones. One prominent in our bee-associations, and living near me, who was not in favor of separators, has a nice mess; the combs are all bulged, and, of course, they cannot be crated. It is a pleasure to record another convert to the use of separators.

Bitter Honey.—C. B. Fassett, Forkston.♂ Pa., on Aug. 23, 1886, asks the following question:

What plant in Northern Pennsylvania has honey with a strong, bitter taste, some so strong that one can hardly eat it? It was gathered during the white clover season, and is white like clover. Some sections are all right, and others are bitter. My neighbors complain of the same thing. I never knew of any here before.

[We give it up. Will some one of our readers in Pennsylvania answer the query?—Ed.]

Buckwheat, etc.—T. F. Kinsel, Shiloh,♂ Ohio, on Aug. 24, 1886, says:

I sowed 4 acres of buckwheat on July 15, and in four weeks it was blossoming some. Bees work on it "thick and fast" each forenoon. They go toward their homes loaded with pollen, and perhaps honey, too. With all the promise of a goodly yield early in the spring, the season has not been above or scarcely equal to an average. I have no great amount of surplus. Colonies run for extracted honey have done the best. Comb honey retails at 15 cents for 2-pound sections; 1-pounds 17 to 18 cents. Purchasers seem unwilling to pay the difference.

Bee-Keeping in Alabama.—M. H. Freeman, Olustee Creek.○- Ala., on Aug. 23, 1886, says:

Our bees are now idle, and I suppose it is caused either from excessive heat or from the absence of nectar in the flowers. This state of things is not unusual at this season of the year. We have just had a poor year for honey, owing to so much rain during the proper season. I started with 8 very weak colonies in the spring, and I have had 2 natural swarms, and have taken only about 150 pounds of extracted honey, and that came from 3 colonies; the others had just built up to strong colonies when the rains set in. The agricultural interest has suffered also in many ways. I like the American Bee Journal better than any of the periodicals that I have seen on apiculture, and think it the best and cheapest bee-literature obtainable, especially for beginners. The Query Department alone is worth many times the cost of the paper.

Good Report.—Fayette Lee, Cokato,⊙ Minn., on Aug. 23, 1886, writes:

Bees are in fine condition. I have already obtained 4,400 pounds of honey, and the fall crop to come yet, and it promises to be good. The upper stories are full of honey. My bees have been swarming since June, from 1 to 8 swarms a day. I returned 75 swarms. Basswood was only half a crop. I took 84 pounds of comb honey from one new colony, and they filled a 10-frame hive. I have 144 of the heaviest colonies I ever saw.

Drouth and Fires in Michigan.—L. Reed, Orono.⊙ Mich., on Aug. 19, 1886, writes:

We have had a very dry season, having had scarcely any rain since June 1, and still the drouth continues. Bees have done a great deal better than I expected; some colonies have stored 90 pounds of surplus in one-pound sections, and some have stored no surplus at all. I had but very few swarms. The bees seem to be storing some honey now, and for the life of me I cannot see what they are getting it from. Every thing is dried up; the fruit trees are dying. I went through my yard and lifted all the hives, and they are very heavy. I shall not have to feed. The raspberry, one of our best honey plants, is mostly destroyed by fire. Almost one half of the country is burned over, and fires are still raging. Some farmers have produced scarcely enough to keep one cow over winter.

Season of 1886.—Robt. A. Vance, New Hamburg, Ont., on Aug. 16, 1886, writes:

This has been a very poor season for bees. The spring was very cold. They got some maple honey, and fruit bloom was very poor. White clover bloomed well, but the nights were cold and the days very warm and dry. The basswood was a failure; there was a tree here and there that bloomed. There is very little goldenrod in this part, as it grows on low, swampy land here. The Bee Journal is a welcome messenger every week.

☞ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. Baldwin, *Sec.*

Honey and Beeswax Market.

Office of the American Bee Journal,
Monday, 7 a. m., Aug. 30, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—It continues to arrive very freely. The demand is light and sales are made chiefly at 12@13c. Extracted is also quiet with prices unchanged. 6@7c.

BEESWAX.—It is easier, and 23c. is about all will bring.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The present quotations are as follows: Fancy white comb in 1-lb. sections, 10@12c.; fancy white comb in 2-lb. sections, 8@10c; buckwheat in 1 and 2-lb. sections, 5@8c; extracted white clover, 6c; extracted, California, 4½@5c; extracted, Southern, per gallon, 45 to 55c.

BEESWAX.—23 to 28c.

McCaul & Hildreth Bros., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

Blake & Ripley, 57 Chatham Street.

DETROIT.

HONEY.—The market is improving. The demand is better and the prices are also improved. Best comb in 1-pound sections brings 14@15c.

BEESWAX.—Firm at 23c. for fair quality.

M. H. Hunt, Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is slow for all kinds and shapes of honey. Prices of extracted honey range between 3½@7c., according to quality; and choice comb honey brings 14@15c. in a jobbing way.

BEESWAX.—Demand is good and arrivals fair. We pay 20c. for good yellow.

C. F. Muth & Son, Freeman & Central Ave.

CLEVELAND.

HONEY.—The demand for honey is not very lively at present, but prices are steady. Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. Kendel, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is active and sales of the comb are large. Extracted is firm with no stock in the city. We quote: One-pound sections of white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 8@10c.; 2-lb. Calif. white sage, 10@11c.; dark 2-lbs., 8@9c. Extracted white clover, 7@8c.; dark, 4½@5½c.; Calif. white sage, 5½@6c.; dark, 4½@5c.

BEESWAX.—20@22c.

Clemons, Cloon & Co., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is fairly supplied with honey, trade is dull, prices depressed, and the outlook is for a large production. Already some is being peddled about the city by the producers themselves, demoralizing the prices, which should not be done. We quote: Choice white in 1-pound sections, 14@15c.; 2-lbs. 13@15c. Dark honey not wanted. Extracted, white, in barrels and kegs, 5@7c.; in tin cans, 6@8c.; dark in barrels or kegs, 4@6.

BEESWAX.—25c.

A. V. Bishop, 142 W. Water St.

SAN FRANCISCO.

HONEY.—It has been extensively handled the last week, and prices are firmer. The supplies of choice honey are by no means excessive in this city, and all lots of choice extracted honey find ready buyers at about 4c. Owners are reserved and refuse to sell under 4c. in the country, as prices seem low. We quote 3½@4c. for extracted honey, and 7@9c. for comb honey, according to quality.

BEESWAX.—It finds buyers at lower prices—20 to 22c. for choice.

Schacht & Lemcke, 122-124 Davis St.

HONEY.—Prices are so low that honey-producers are holding back their product; still the market is well supplied. We quote: Comb, extra white, 8½@10c.; off grades, 6½@7½c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.; dark, 3c.

BEESWAX.—22½@23c.

O. B. Smith & Co., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Firm at 22c for prime.

D. G. TUTT & CO., Commercial St.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1½c. per light, extra.

◆

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at **$6.00** each.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

Italian Queens.—We have a few untested queens which we can send by return mail. Three for $2.75; six for $5.00; twelve for $9.00. For Tested, double the prices.

◆

When Marketing Extracted Honey, It is a sad *blunder* to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

◆

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

QUEENS for SALE or EXCHANGE.

"Jerseyville, Ills., July 23, 1886.—Mr. James T. Wilson: Dear Sir—The 55 Italian Queens that I bought of you last year were all purely mated except one. The most of them were Choice Queens, and just as good as higher priced ones, for general purposes.—E. Armstrong."

One Queen, 75c.; 6 for $4.00. Will work as well on red clover as anybody's Queens. I will exchange Queens for Honey, Alsike Clover Seed or Poland-China Hogs.

☞ All Queens sent by Return Mail, unless notified to the contrary. Address,

35A1t J. T. WILSON, Nicholasville, Ky.

THE CHAPMAN HONEY-PLANT.

IT has not been my aim to say much about, or offer any seed of my Honey-Plant for sale, till after the report of the committee appointed by the North American Bee-Keepers' Society to examine and determine its value as a Honey-Plant. The committee met at my place on July 28 (all but Mr. Manum, of Vt., who was prevented by unforeseen circumstances). The committee present was A. I. Root, of Medina, O., L. C. Root, of Mohawk, N. Y., and N. W. McLain, of Aurora, Ills. They will report to the annual meeting of the Society at Indianapolis, Ind., Oct. 12—14, 1886.

Since the meeting of the committee at my place, members of it have written so favorably of the Plant in the bee-papers that I have received a large number of letters of inquiry, requiring much of my time to answer. I now wish to say that I have no seed but the present season's growth, which will not be ready to send out until about Oct. 20. After the report of the committee at Indianapolis, I will advertise the seed for sale in all the leading bee-papers. It will be sold in half-ounce, ounce, 2-ounce and four-ounce packages. The prices will then be determined.

H. CHAPMAN,
35A1t VERSAILLES, Catt. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

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high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

Prices Reduced.

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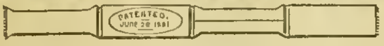
SECTIONS.



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☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to

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Also, send for *Free* Circular of Italian Bees and Queens, bred for Honey and for Sale. The "Adjustable" Honey-Case, and other Standard Supplies for the Apiary.

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NOW is the time to Italianize Cheap Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates : I Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; I Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
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Golden Italians.

WARRANTED Queens 75 cts. each ; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,

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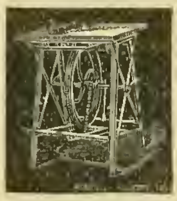

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Send Postal Card for Illustrated Circular and Price-List.

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We make the finest Honey-Sections in the World and make no exceptions. G. M. Doolittle says : "The last sections are just complete." James Heddon—"They excel *everything* in the line of perfect workmanship." Prof. N. W. McLain—"The sections excel anything I have seen heretofore." J. B. Mason—"Have received samples from all manufacturers who advertise in the bee-papers. I must say this is by far the nicest section I have ever seen." Jno. L. Janeway—"They seem perfection itself so far as human workmanship can go." Sample for 2-cent stamp. Price-List of Sections, Hives, Syrio-Albino Queens and Bees, and other Apiarian Supplies, free.

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Send for our large Illustrated Catalogue, sent free to any address.

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6 Inch, Price, $20.00.

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A. J. COOK, Author and Publisher,
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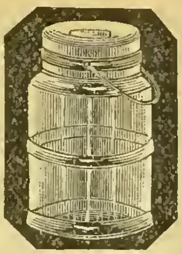
FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	**$1.60**
" 2 pounds " "	**2.00**
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THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Top and Bottom Feeders, Entrance Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

10A1y **J. M. SHUCK, Des Moines, Iowa.**

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

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CHAS. F. MUTH & SON,
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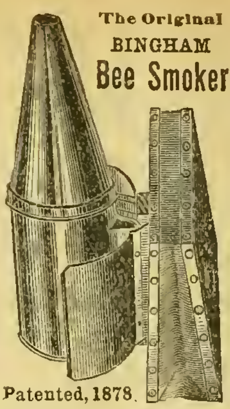
P.S.—Send 10c. for Practical Hints to Bee-Keepers

RIBBON BADGES.

We have some ELEGANT RIBBON BADGES, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOS. G. NEWMAN & SON.,
923 & 925 West Madison Street, Chicago, Ill.

The Original BINGHAM Bee Smoker



Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years.
E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet.
F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.

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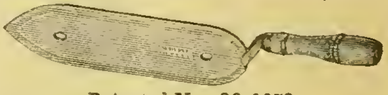

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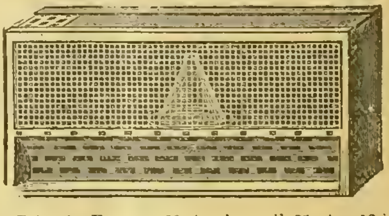

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I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Sept. 8, 1886. No. 36.

Hundreds of dewdrops to greet the dawn,
Hundreds of bees in the purple clover,
Hundreds of butterflies on the lawn,
But only one mother, the wide world over.

◆

A Hand-Book of Bee-Keeping for India has been published by Mr. J. C. Douglas.

◆

To Raise Prices by individual effort, work your home market for all that it is worth, and ship as little as possible to the cities, so as to avoid a "glut in the market."

◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

◆

Bird's-Eye View of Bee-Keeping.—We have received from the publishers, Jones, Macpherson & Co., Beeton, Ont., a copy of this little book. It is written by Rev. W. F. Clarke, and contains 60 pages. Of the contents Dr. C. C. Miller has already advised our readers on page 487. It is certainly new and novel, all of it being in rhyme; as well as "lively, entertaining and practical." It can be obtained at this office for 25 cents.

◆

Round Trip Tickets to the Convention.—As Manager of the National Bee-Keepers' Union, we have made arrangements with the Indianapolis lines of railroad for round trip tickets from Chicago to Indianapolis and return to Chicago, good from Monday to Saturday, Oct. 11 to 16, 1886, for $7.30. The fare one way is $5.50, and this is one fare and one-third. To obtain these tickets, it will be necessary to get a certificate signed by Thomas G. Newman, stating that the bearer is *entitled* to the reduced fare. Now, do not wait until you come to Chicago to get this certificate, for we may have gone before you come. Send for the certificate at once; and it will be sent by return mail.

The Programme for the National Convention at Indianapolis may be found on page 565. The Northwestern of Chicago, the Indiana State and several other societies are to meet at the same time and place in a union convention. The "North American" was born there on Dec. 21, 1870. The report of that meeting makes this statement:

> Accordingly, on Dec. 21, a large number of the most prominent and enterprising of bee-keepers of the United States and Canada, met in convention at the House of Representatives, in Indianapolis, and held six sessions, the last one ending at midnight on Dec. 22, 1870. Every seat in the House was occupied; the States represented being Indiana, Illinois, Michigan, Ohio, Wisconsin, Kentucky, Iowa, New York, Tennessee, Missouri, and Pennsylvania. Delegates were also present from Utah and Canada. On the whole, it is safe to assume that never in the history of America has bee-culture been represented in a convention by so large an assemblage of wide-awake, intelligent and enterprising bee-keepers.

Since then only about sixteen years have passed away, and almost all of those who were the most active and "the brightest lights" have passed to "the beyond," or are awaiting "the angel's message" announcing that their time is up. But few of those whose names figured largely in the report of that meeting, are now actively engaged in the pursuit of bee-keeping. We may count them on the digits of one hand. Prof. A. J. Cook, Rev. W. F. Clarke, and M. M. Baldridge are still with us, but where are the rest?

Of those who formed the committee to prepare a constitution, Aaron Benedict and Rev. W. F. Clarke are the only ones found among "the workers" of to-day, as will be seen from the following extract:

> On motion of Dr. Bohrer, of Indiana, a committee of one member from each State represented, was appointed to prepare a constitution and to nominate officers, viz: Z. S. Richardson, of Indiana; Ezra Rood, of Michigan; D. L. Adair, of Kentucky; M. L. Dunlap, of Illinois; Aaron Benedict, of Ohio; Adam Grimm, of Wisconsin; Elisha Gallup, of Iowa; Dr. T. B. Hamlin, of Tennessee; Robert Bickford, of New York; W. D. Roberts, of Utah Territory; Daniel McIlvain, of Pennsylvania; J. L. Smith, of Missouri, and Wm. F. Clarke, of Canada.

When another sixteen years shall have passed, how many of us will then be known among the laborers in the pursuit? We should "act well our part," and leave it to history to record the efficiency of the services we have rendered.

To this end, let us make a general rally at Indianapolis. There are just four weeks in which to prepare to go, and to lay out our work so as to be able to do it. Indianapolis is happily chosen. It is centrally located, and has a complete net-work of railroads, so that it is readily accessible from all parts of the compass.

◆

The Fairs are now being held, and many of our readers who are going to exhibit have sent to us for sample copies of the BEE JOURNAL to put into the hands of those who keep bees, and happen to be at the Fairs. If any others are intending to exhibit at any Fair, please send at once to this office for as many "samples" as you think you can use to advantage in getting up a club. Do not put off sending for the copies until time for the Fair, get them *at once* and start the club, finishing it up at the fair.

St. Louis Fair.—We acknowledge a complimentary ticket to this Fair, but shall not be able to use it. The Fair opens Oct. 4 and continues six days. Seventy-three thousand dollars is offered in cash premiums, to be distributed among the exhibitors. During the entire week the streets of the city will be illuminated by 50,000 gas jets, intermingled with hundreds of calcium, incandescent and arc electric lights. On the night of the Tuesday, Oct. 5, the grand annual nocturnal pageant of the "Veiled Prophet," comprising 35 floats, will be given, at an expense of thousands of dollars. All railroad and steamboat companies have generously made a rate of one fare for the round trip during the entire week.

◆

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

◆

The Illinois State Fair is now being held at the West-Side Driving Park, Chicago. This is the 34th annual Fair of the Illinois State Board of Agriculture. It lasts the whole week, Sept. 6 to 10, and is well patronized.

◆

To Vice-Presidents.—President H. D. Cutting desires the following notice carefully read:

> All vice-presidents of the North American Bee-Keepers' Society who cannot attend the convention at Indianapolis, Ind., Oct. 12 to 14, will please make out their reports and send them to the secretary, F. L. Dougherty, Indianapolis, Ind. It is hoped and expected that all vice-presidents will report, that we may have a general expression from all parts of the United States and Canada.

◆

The Texas "Bee Journal" is dead, and there is another calling itself a "Bee Journal" in Maine just born. The latter is well printed, and edited with ability—but why it should select the name of "Bee Journal" when there are hundreds of other good names, is more than we can explain. Every little paper that, as Novice expresses it, "lives awhile and dies awhile, and then lives and dies again," wants to name its baby some kind of a "Bee Journal;" for which there is not the shadow of an excuse—for this paper has rightly possessed that name for over a quarter of a century.

◆

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers before Jan. 1, 1887.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Rearing a Large Number of Workers.

Query, No. 301.—What is the best plan to secure a large number of workers and force them into the fields at the beginning of the honey-flow?—A. S., Ark.

Slight speculative feeding early in the season.—DADANT & SON.

Stimulative feeding and good care all the year.—A. J. COOK.

I have given my plans in back volumes of the BEE JOURNAL. An adequate answer would be too lengthy for this department.—G. M. DOOLITTLE.

Keep the best of queens, and their bees will go into the fields when the honey comes, without any forcing.—H. D. CUTTING.

If the bees are wintered well, and furnished sufficient stores, a sufficiently large number of workers will be the result, and they will force themselves into the fields, as soon as there is honey to gather. I do not, as a general thing, approve of spreading the brood, changing the combs about, etc.—W. Z. HUTCHINSON.

For your latitude put your bees into winter quarters with a hive full of bees, and from 20 to 30 pounds of stores, and then in all probability your colonies will be prepared for the early honey-flow. This plan is preferable to that of being all the time "tinkering" with them by feeding.—J. P. H. BROWN.

See that your colonies have good strong queens, good protection at the top of the brood-nest, and more important than all, plenty of stores and to spare, in the early spring, and the bees will force themselves into the fields when there is anything for them to do.—G. W. DEMAREE.

Use a reversible or an interchangeable sectional brood-chamber not too large, if working for comb honey. Adjust the supers early. Reverse the hive or interchange the sectional parts every 5 or 6 days in building up. There is no advantage in reversing or interchanging except to rapidly extend the brood. Get the brood early and rapidly by the process of reversing, and we will then be sure to get the honey, if any is to be had. There is no use to reverse combs or hives after we have sufficient brood and bees.—G. L. TINKER.

The best I know is to use a double, interchangeable and invertible brood-chamber, with which, by speedy manipulation, we breed bees the fastest, and when the harvest is well upon us, crowd the multitude into the fields and sections by contraction by simply removing one of the brood-cases.—JAMES HEDDON.

Force the queen to laying up to her full capacity as early as possible by covering the frames well with blankets to confine the heat to the hive, and also by stimulating as much as possible, either by feeding diluted honey or sugar syrup, or by uncapping the combs within the hive. As it requires about 35 to 40 days for a bee from the egg to become a forager, one can, by knowing when the honey season begins, know just when to start brood-rearing. Look out, however, for early swarms.—J. E. POND, JR.

* * *

Prevention of Increase.

Query, No. 302.—What is the best method of preventing an increase of more than one from each colony?—S. J.

Placing the swarm on the old stand and giving it the surplus boxes.—DADANT & SON.

Extracting is sure; Heddon's method is good; and plenty of room above will usually suffice.—A. J. COOK.

The Heddon method of preventing after-swarming has worked well with me.—W. Z. HUTCHINSON.

Divide the colony and give a young laying queen to the queenless part.—J. P. H. BROWN.

Removing the old hive to a new location, and putting swarms on the old stand is generally successful. The Heddon plan may be better.—C. C. MILLER.

After they have swarmed once, cut out all queen-cells and run in a young queen. If you have no young queens on hand, leave one queen-cell and watch results.—H. D. CUTTING.

I believe the *surest* method is to let them swarm naturally, and prevent after-swarms by what is called my method. This *may* be the best method, all things considered.—JAMES HEDDON.

In a multiplicity of opinions, it is hard to say what is the best. My plan, and the best for me, is to make my increase on the nucleus plan; by this plan I can keep the increase down to less than one swarm from each colony without difficulty.—J. E. POND, JR.

In a good honey-flow it is best to let virgin queens run into every hive soon after casting a prime swarm. Second-swarms will be prevented in about half the cases so managed. I prefer to let second-swarms issue, and return them after cutting out queen-cells and selecting the queen of my choice.—G. L. TINKER.

By taking the combs with the few adhering bees, when the swarm is out, to a new location and hiving the swarm in the old hive on the old stand. In 24 hours give a mature queen-cell or a just-hatched virgin queen to the reduced old colony in its new location. This is a modification of the Heddon plan, which I prefer after testing both for three seasons.—G. M. DOOLITTLE.

After all, the cheapest plan and the most sure plan is to hive the swarm on the old stand, reverse the entrance of the old hive, placing it close to the new hive. Then on the seventh day after the swarm issues, take out all the frames in the old hive and shake off nearly all the bees in front of the new hive, and move the old hive to a new location in the apiary. No queen-cells need be cut out. The swarm will give you the surplus, and the old colony will build up all right.—G. W. DEMAREE.

* * *

Rearing Queens and Italianizing.

Query, No. 303.—If you had several colonies of blacks to Italianize, describe the manner in which you would rear and introduce queens?—Sub., Ark.

Get good Italian queens in the spring and follow the directions of the books.—A. J. COOK.

Perhaps rear queens in nuclei and unite the nuclei with black colonies after destroying the queen.—C. C. MILLER.

Read some good standard work on bee-keeping.—H. D. CUTTING.

I have done so in my book.—JAMES HEDDON.

Methods of "queen-rearing" and "introducing queens" have been repeatedly given in the BEE JOURNAL, and can be found in the text-books. There is not room here for a proper answer.—W. Z. HUTCHINSON.

Any of the text-books (among which I can refer to "Bees and Honey" as being among the best) give a full description of the methods by which Italianizing should be performed. The size of the apiary other than the colonies desired to Italianize would be an important factor in the case; the text-book, "Bees and Honey," explains the matter fully.—J. E. POND, JR.

If your colonies are all black, your best plan would be to purchase pure Italian queens either tested or untested, and introduce them. If you have a pure Italian queen to start with, rear queen-cells or queens from her. Take the precaution to allow no drones to issue from your black colonies, but breed all the drones you can from your Italians. The majority of your queens will purely mate if there are no black drones within a radius of three miles of your apiary. For introducing, I prefer a cage with an open side to be pressed into the comb.—J. P. H. BROWN.

Rear queens by keeping the Italian colony swarming so as to give the best of queens. Introduce by the caging plan, or direct introduction, called the "Simmins' plan," as is best suited to your previous knowledge. Of course the queens must be fertilized in nuclei.—G. M. DOOLITTLE.

I would rear the Italian queens in nuclei, and after they begin to lay eggs I would remove the black queens and introduce the Italian queens in their places. I could not describe the proceedings particularly here for want of space. Italianizing can be cheaply done by introducing queen-cells from pure Italian colonies a few days after the black queen has been removed, but some failures must be expected when thus proceeding, because some colonies seem to be "dead set" on rearing their own queen-cells.—G. W. DEMAREE.

If no other black bees were near I should prefer to take two Italian colonies late in the season, one having drones. Take out the black queens and cut out all queen-cells at the end of nine days, and give a small piece of comb with just hatching eggs from the colony without drones. If there are a few black drones left, they must all be killed. This plan never fails, and is the next best if you do not wish to purchase the queens from a queen-breeder.—G. L. TINKER.

North American Bee-Keepers' Society.

FRANK L. DOUGHERTY.

The North American Bee-Keepers' Society will hold its 17th annual convention Oct. 12, 13 and 14, 1886, at Indianapolis, Ind. The meeting will be held in Pfofflin's Music Hall, 82 and 84 North Pennsylvania Street, one of the most pleasantly situated halls in the city, having good ventilation and plenty of light. The Society head-quarters will be at the Occidental Hotel, corner of Washington and Illinois Streets. The regular rates of this hotel are $3 per day; special rates for those in attendance at the convention, $1.50 per day.

The Northwestern Bee-Keepers' Society, the Indiana State Society, the Eastern Indiana, with various county and joint societies will meet in union with the North American, making it one of the most important meetings of bee-keepers ever held in the country.

Ever thing possible will be done to make the meeting pleasant and entertaining. An earnest, cordial invitation is extended to all.

The following is the programme for the three days:

FIRST DAY—TUESDAY.

Forenoon Session, 10 a.m.—Convention called to order. Address of welcome, by Gov. I. P. Gray; "Response" by the President, H. D. Cutting; "Welcome to the City," by Mayor Caleb S. Denny; "Thanks," Dr. C. C. Miller, President of the Northwestern Society. Calling the roll of members of last year. Payment of annual dues. Reception of new members and distribution of badges; reports of Secretary and Treasurer. Announcements.

Afternoon Session, 2 p.m., Special Business.—Annual address of the President; "Bee-Studies," Prof. A. J. Cook, Agricultural College, Mich.; "Apicultural Journalism," John Aspinwall, Barrytown, N. Y.; "Bee-Literature," Thomas G. Newman, Chicago, Ills.; "The Coming Bee—What encouragement have we to work for its advent?" R. L. Taylor, Lapeer, Mich. Subject for discussion, has "Apis Americana" been reached?

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions that may have accumulated during the day.

SECOND DAY—WEDNESDAY.

Morning Session, 9 a.m.—Announcements. Communication. Call of the Northwestern Society to elect officers. Election of officers of the Indiana State Society. Call to order. "Rendering Comb into Beeswax," C. P. Dadant, Hamilton, Ills.; "Foul Brood," A. J. King, New York. Selection of place for holding meeting in 1887. Election of officers.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. "Bee-Keeping and Apiculture," Prof. N.W. McLain, U. S. Apicultural Station, Aurora, Ills.; "Feeding Bees for Winter," Jas. McNeill, Hudson, N. Y.; "Wintering Bees," Dr. J. B. Mason, Wagon Works, Ohio; Subjects for discussion, "Is the use of Foundation Necessary in Modern Bee-Culture?" "Are Perforated Honey-Boards a Success?" Unassigned essays.

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions in question-box. Social communications.

THIRD DAY—THURSDAY.

Morning Session, 9 a.m.—Announcements. Miscellaneous business. Communications. "A Talk on Hives," James Heddon, Dowagiac, Mich.; "Reversible Hives and Frames," J. E. Pond, Jr., Foxboro, Mass.; "Drones and Drone Comb," W. Z. Hutchinson, Rogersville, Mich.; Reports of Vice-Presidents; "Progress of Bee-Keeping in Indiana," Jonas Scholl, Lyons Station, Ind.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. Explanation of various articles on exhibition.

Many good things yet to be added to the programme are not sufficiently developed to give.

Indianapolis, Ind.

Convention Notices.

☛ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.
E. T. ABBOTT, *Sec.*

☛ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, *Sec.*

☛ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. BALDWIN. *Sec.*

☛ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☛ The Eastern Indiana Bee-Keepers' Association will meet at Richmond, Ind., on Sept. 16, 1886. M. G. REYNOLDS, *Sec.*

☛ The bee-keepers of Moultrie and adjoining counties will hold a meeting in Turner's Hall, at Lovington, Ills., on Saturday, Sept. 11, 1886, at 1 p.m., for the purpose of organizing. All bee-keepers are respectfully invited to attend. Ladies are especially invited.—*By order of Committee.*

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⟍O northwest: O⟍ southeast; and ⚲ southwest of the center of the State mentioned.

For the American Bee Journal.

Grading Honey for Market.

G. M. DOOLITTLE.

I am asked to give my "views about grading honey for market," and as the season of the year is near at hand when our product is to be gotten ready for market, a few words on this subject may not be out of place.

From 10 to 15 years ago when I sold all my honey readily to one man in Syracuse, N. Y., at from 25 to 28 cents per pound, he instructed me to put about alike proportion of the different grades of honey in each crate, as that was the way he preferred it, as this gave him the best results in the end, he said. As he died in 1878, I was obliged to seek a market elsewhere, and as I am not given to peddling I began to ship my honey on commission, filling the shipping-crates as I had before been instructed. The parties to whom I consigned the honey soon began to write to me saying that they could obtain more satisfactory prices for me if I would make at least three grades of my white honey, putting dark or buckwheat honey as a fourth grade. The next year I tried the plan with a part, and sent the rest as I had heretofore done. The result was as I had been told, the graded bringing me quite an advance over the other not so graded. For instance, No. 1 sold at 20 cents per pound; No. 2 at 18 cents, while No. 3 sold at 14 cents, making an average of a little over 17 cents per pound. That which was not graded sold at 16 cents. The reason for this seems to be that two or three sections of poor honey in a crate has a tendency to disgust people so that they can scarcely see the good honey at all; while if all are poor they do not expect to purchase it for less than two-thirds the price of good honey.

Again, the contrast between good and poor honey, both being in the same crate, is greater than it is when in separate crates, unless the two are side by side so that one can be compared with the other. Human conception taken in through the eye is faulty to a certain extent, unless the things to be compared are so arranged that the eye can take such things in as a collection, at one glance. For instance, I have a grade of all No. 1 honey in my house, or a sample of it, and all No. 2 honey in my shop 3 rods distant. A purchaser comes along and stops at the shop first. I show him the No. 2 honey. He calls it fine and thinks it compares favorably with any honey that he has seen. I now take him to the house and show him the No. 1 honey, and nine chances out of ten he will say he sees little difference in the two lots. But take some of No. 1 and No. 2 and put them side by side and he will say there is quite a difference, "that's a fact."

Now taking advantage of this fact, and all the lessons of the past, I grade my honey as follows: Every perfect section of nice white honey is placed in crates as No. 1. To be No 1 the comb must be smoothly and evenly capped over throughout its entire surface, with no discoloration of the comb near the bottom of the box. The section itself must look new and clean, while no cells of bee-bread must be seen while looking through the honey toward the light. No. 2 honey is to be the same as No. 1, except that in it is put all the sections with discolored or soiled combs near the bottom of them (so discolored or soiled by the bees traveling over them), together with such sections as show a few cells of pollen (covered with honey) when held up to the light. In the No. 3 grade I put all sections having a few unsealed cells at the bottom of the combs, those that by accident or by brace-combs have their surface marred; all such as have pollen in them to any extent, and all that are badly soiled or discolored by the travel of the bees. If I have any sections in which brood has been reared, or that are one-third unsealed, they are put by themselves and go as No. 4 or dark honey. As a rule the unsealed ones had better be extracted and the combs kept over till another season.

In shipping this honey I send only one grade to one commission merchant, preferring not to consign the different grades to the same party, for when I have done so it often happens that No. 2 will sell for from 2 to 4 cents less per pound than No. 1, while if No. 2 is sent to another party he will sell it for nearly if not the same price that the No. 1 is sold at. Here comes in the point of comparison again. I might go on and multiply words by citing several instances in confirmation of the correctness of the above conclusions, but I think this will be sufficient, so that the reader will "catch on."

Borodino,⊙ N. Y.

For the American Bee Journal.

Marketing Honey.

C. W. DAYTON.

In traveling about this country from town to town selling honey, I am surprised at the varying conditions of the market. In some towns I find nice comb honey retailing at 10 to 18 cents per pound, and sometimes extracted honey is comparatively unknown. Drive on 7 or 8 miles and we find the comb honey at 15 cents and extracted at 10 cents per pound. In some towns I am enabled to sell a little extracted honey only by downright argument, where in other towns they will come running from all directions with pans, jars and pitchers as though the supply was very limited.

I have gone into towns where I could not sell a pound of extracted honey to the merchants, but retailed it from the wagon as fast as it could be weighed out. Adulteration had traveled that way. At other times where comb honey was a drug at 12 cents, and extracted a stranger and not wanted at the stores, the one who was with me declared that we left extracted honey at quite every house in the town; and the sales increased in the amount taken with every trip. Sometimes they quote comb honey as low as 9 and 10 cents, and as 8-cent extracted honey is the lowest price of any I carry, the market is dull indeed.

Do you ask why this state of affairs exists? Why, the answer is this: Because there is a pack of "apicultural nuisances" "tagging after," and trying to hang on our pursuit. There are those who are just "cranky" enough to continue knocking down the price of comb honey until extracted has no sale, and the comb honey being a luxury, and nothing else, it remains in the same old channels, and the amount taken is never increased, as luxurative appetites are not fluctuated by low prices. Sometimes an old farmer who keeps bees in his "gums," amongst the worms, will bring in comb honey by the panful and knock the price down to 5 or 6 cents, and unless there is an apiarist foolish enough to follow, the price rises again when the farmer's honey is sold out.

The footprints of adulteration are often seen; also the effects of offering a poor grade of extracted honey where a good article was expected. Now there is, it appears, those who have knocked themselves on the head so much in the sale of honey that where they could have sold extracted at 8 cents and comb honey at 15 cents per pound, they find their operations confined to about the same amount of comb honey only, and that at starvation prices. In instances of this kind I have several times found their local markets bare of extracted honey bebause they offered comb honey so cheap that the merchants did not want extracted honey at any price, and the bee-keepers at such towns were "toting" their extracted honey to other towns to play "hog" with other apiarists. I would say, let them exercise a little common sense at home and then extend it abroad.

Let us hold to one remunerative price, and contine to convas and sell at that unaltered price, and when we have not the time to sell our honey and care for the bees also during the year, then conclude that honey is an over-production, and hold the honey or get out of the business. This should be preferable to rushing it into consumption for a short time during the fall, and leaving the market bare the rest of the year. It may be that the stomach of the consumer is a good store-house for honey, but I believe the length of time from the time it leaves the producer until it is deposited in such stomach is worthy of consideration also. It strikes one with amazement how many stomachs there are to be filled, and the amount of honey required to fill them. When we learn to properly administer the honey, the more we fill them the emptier they will become.

Bradford,♂ Iowa.

Haldimand, Ont., Convention.

A meeting of the Haldimand Bee-Keepers' Association was held at Caledonia, on Monday, Aug. 23, 1886. The minutes of the last meeting were read and approved.

How to prepare bees for winter was then discussed. The President said it was necessary to have plenty of stores, plenty of bees, and a good queen. When the weather begins to get cold he packs them with chaff and leaves them alone until spring. Before putting on the top story he puts a couple of strips across the frames so that the bees can pass from one frame to another. Mr. Armstrong gave his plan of wintering, which was about the same as the President's. He also used a double walled Jones hive, and was very successful in wintering his bees. He uses a clamp for single-walled hives; the clamp is packed with sawdust on all sides and on top of the hives, and he had not lost a colony on account of cold weather. He described his way of making the clamp, which any one can build.

Mr. Richardson asked whether it was advisable to put the bees out-of-doors so as to give them a flight on a warm day. Mr. Armstrong said not, as long as they were quiet.

Mr. John Kindree gave a very interesting account of his experience with bees, relating his losses through not knowing how to handle them. In answer to Mr. Richardson, the President said that about 25 or 30 pounds of honey was sufficient to winter a colony. The more they were protected the less honey they would consume.

The President said he had not had much experience with bee-diarrhea, but he thought if the bees were properly prepared for winter, there would be no diarrhea, and an ounce of prevention was better than a pound of cure. One cause of the disease was too long confinement owing to cold weather, and the bees being unable to change their position in the hive, would eat pollen, which was sure to cause the disease. The remedy was to keep the hive warm and dry.

Mr. Armstrong said if colonies were properly prepared for winter and the hives kept warm and dry, there would be no danger of diarrhea.

Mr. John Kindree asked when was the best time to move bees, to which Mr. Armstrong replied, that the spring was the best time, if the bees were to be moved a short distance, but for a long distance summer was the best time.

Mr. Jones asked which was the best time to put the bees into winter quarters? The President and Mr. Armstrong said it depended upon the season, but they should be put away before settled cold weather.

The next meeting will be held in the Town Hall at Cayuga, on the third Tuesday of January, 1887, at 10 a.m. E. C. CAMPBELL, *Sec.*

For the American Bee Journal.

Sugar Stores for Bees in Winter.

4—GEO. F. ROBBINS, (57—92).

I have been an on-looker during the progress of the controversy about the matters of sugar stores and pollen in their relation to the bee-wintering problem. It seeems to me that some points have been overlooked by most parties in the discussion. One of these points is the relative value of certain kinds of evidence. At least one of the disputants—Mr. Pond—is a lawyer. I think that I know at least one valuable law in the science of equity. It is this: That the testimony of an eye-witness over-weighs all other kinds of evidence.

Theories of the most plausible and convincing kind are seldom, perhaps never, wanted in any court of trial. Courts and juries want to know what the witness has seen and heard—the testimony of experience, in fact. Two men might theorize in the most logical style by the hour; while other men, in whose intelligence and integrity judge and jury have confidence, might simply tell what they have seen and heard; and though what they have witnessed may be contrary to reasonable theory and general belief, such a court will take the testimony of the latter rather than the former.

Now the questions, "Does pollen cause bee-diarrhea and death?" and "Is sugar better than honey as winter food for bees?" are on the docket. The testimony of theory is this: "The Creator made the bees for honey, and honey for the bees, and He meant both honey and pollen for the bees to eat, and it follows that honey and pollen cannot be injurious to the bees." The argument appears reasonable and conclusive. But now comes Messrs. Heddon and Hutchinson on the stand, and the latter deposes that he put some bees into a cellar, others he buried, and still others he packed in chaff on the summer stands. Some he wintered on natural stores, some on all sugar stores, and a few on a mixture, or rather partly of each. At least three winters in succession he did this with virtually the same result, viz: Those on natural stores were badly affected with the diarrhea; those on part honey and part sugar stores were slightly affected, and became so when they reached the natural food; while those on wholly sugar stores had not a trace of diarrhea. Read his reports in various bee-papers, and see how nearly identical the results were. In the last one especially he says: "One fact stands out beautifully in bold relief—not one colony with nothing but pure sugar stores has perished from or showed a symptom of diarrhea."

Now turn to page 342, where Mr. Heddon gives a chapter in his experience with the two kinds of food, wherein he shows that he was convinced by experience—by costly experience—against his hope and wish, that his only safety is in sugar stores. He, too, has made repeated experiments with the two foods in connection with his tests of pollen and no pollen, the results of which all tend toward the same end. Here are two intelligent and honest witnesses testifying to facts as sure and undoubted as consciousness can make them. If such evidence is not proof, then I do not know what evidence is. The only way to meet those arguments is to prove the utter fallacy of the facts, or oppose them with like facts—experiments under like conditions of the same kind, with opposite results.

Read then what Mr. Heddon and Prof. Cook say on the pollen theory and cognate points. It would be too tiresome to sum up the evidence there given—facts in experience and scientific investigation, showing that pollen, when consumed, is the most fruitful cause of diarrhea. First: Colonies wintered on sugar syrup without any nitrogenous food have not a trace of diarrhea. That is their uniform experience.

Second: Colonies with honey and considerable pollen die with diarrhea, or at least have the disease badly. That is uniformly the case, or almost so.

Third: This diarrhea is due to the accumulation of fecal matter. Those having and consuming pollen accumulate such matter; those with no pollen or nitrogenous food do not. The testimony on this point is pointed and unvarying.

Fourth: The excreta of the diseased bees is composed of the same nitrogenous elements, and the same kind of pollen grains as the food consumed by the bees. Such is the testimony of the witnesses cited. If the evidence they adduce does not prove the point claimed, I repeat that I do not know what evidence is worth.

I have been a reader of a prominent bee-paper nearly ever since the pollen theory was broached at all, and I feel certain that I have seen no opposing testimony to meet the evidence given, squarely and on the same ground. If I have I have forgotten it, and will "own up" if shown such testimony.

Mr. Pond seemed to think that he had given some on page 191 of *Gleanings* for 1884. His bees wintered well on the summer stands and natural stores, with considerable pollen. But his winter was not so long nor so severe as Michigan winters, and he does not show that the bees consumed any pollen. He does say that they did not consume much food at all. Besides, his testimony is only negative, while that I have briefly referred to is positive. I have seen much other material of the same kind.

The most forcible contribution of the opposition that I have seen is that given by Mr. Doolittle in *Gleanings*, pages 231 and 344, 1885. He gave a colony, the autumn before, five combs clear of pollen, as he thought, and fed them about 25 pounds of granulated sugar syrup. They took the diarrhea and died. He sent a part of one comb from which the bees had not taken the food, to Prof. Cook, who found on examination pollen-grains at the bottom of the cells. Mr. Doolittle himself says (page 343): "Hence it will be seen that these particles of pollen were scattered about the bottom of all these cells when the combs were given to the bees."

Those bees consumed nearly all their stores by the last of February. Some of the bees had previously been sent to Prof. Cook, who, although he found no pollen-grains, did find evidences of nitrogen in their intestines. Now, mark the facts: Nitrogen in the bees, and pollen in the combs. It is at least a reasonable probability, since they ate nearly all their food, and reared a little brood, as he says, that they consumed that pollen which gave them the diarrhea. Certainly they obtained nitrogen some way, and in the light of these things, Mr. Doolittle's experiment does not even prove a negative. Mr. Doolittle is not very explicit as to degrees of cold and dampness. I could adduce a great deal more of this sort if I had time, and the readers' patience. The statement of this point is very incomplete.

Authorities all agree that the causes of bee-diarrhea are dampness, long confinement and improper food. One, more or all of these ingredients must be present. Now I have generally wintered my bees on the summer stands, and stores of honey and pollen. I have never lost more than 3 colonies in one winter, although a few always merely come out. I have never had a bad case of diarrhea where the hive kept everything dry. Now why is my experience so different from Mr. Heddon's and others? Why, there have never been forty days in succession on which my bees could not take a flight. Those of Mr. Hutchinson, for instance, have been confined of necessity for 150 days. My bees will come out after a month's confinement, and often spot the snow and hives considerably. That flight relieves and saves them. Mr. H's bees do not get that relief. Do you not see the difference? Not all our country has the long, cold winters of Michigan. Mr. Heddon himself intimates that his treatment is necessary only in such extreme latitudes. They comprise comparatively a small portion of the country. Hence the fact that apiarists throughout the rest of the country may winter their bees successfully on natural stores, does not make the teachings of these three men any the less true. It seems to me if this fact were properly considered, a great deal that has been written would have remained unwritten.

Mechanicsburg,⊙ Ills.

Cedar Valley Bee-Keepers' Convention.

The Cedar Valley Bee-Keepers' Association met at the office of J. Mosher, of Waterloo, Iowa, Aug. 18, 1886. The meeting was called to order by President C. P. Hunt, at 1:30 p.m. The Secretary then read the report of the last meeting, which was accepted, after which was the election of officers for the following year: Mr. C. P. Hunt, of Waterloo, re-elected President; J. Mosher, Vice-President; H. E. Hubbard, of La Porte City, was chosen Secretary, and A. J. Norris, of Cedar Falls, Treasurer.

The President then proceeded to draw questions from the question-box as follows:

Question: If any one having 50 or more colonies has them in hives that he likes, all things considered, is it better for him to change the size in order to get his supplies cheaper? Answer: No.

What is the best ventilation for hives in winter? Some use burlap and others a tight honey-board. Mr. A. J. Norris thinks it the most perfect ventilation to have a tight honey-board and then raise the hive from the bottom-board.

What is the best size for the entrance of a hive for a large colony of bees in hot weather? Three-eighths of an inch high and the whole width of the hive.

How long after comb honey is capped over should it be taken off? The sooner the better.

Will bees commence to work in sections as soon when there is a whole case, or is it better to put on a few sections at a time? Part were in favor of a whole case while others only a few at a time.

What is the best shade for bee-hives? Mr. A. J. Norris said that an apple orchard was the best shade; Mr. J. Owens thought it best to let the hives set in the sun with shade-boards on top of them.

Can bees eat sound grapes when their skins have not been broken? President C. P. Hunt says that be has had his bees for the last 25 years close to his grapes, and has never seen them touch good sound grapes. Several other members have had the same experience.

Do bees injure small fruit while in bloom? No.

What is the best method to keep bees from swarming? Put on the honey receptacles early in the season and give plenty of room.

What is the proper distance to put frames from centre to centre in the brood-chamber of the hive? One and one-half inches.

Is it advisable to use whole sheets of foundation in the brood-chamber? Some thought that it paid while others thought it did not.

Where is the best place to keep surplus combs? Some keep them in a cellar. Mr. Robt. Quinn keeps his in a tight room, and then fumigates them with sulphur.

Is it advisable to clip the queens' wing? No.

What is the best way to get bees out of sections? Drive them down with smoke and then carry the case to the honey house and let the bees out at the window. There were several other methods given.

What is the best way to feed in the spring to simulate weak colonies? Feed on top of the hive in a feeder.

EVENING SESSION.

At 7 p.m. the convention re-assembled, and continued the questions as follows:

Which is best for comb honey, a deep or shallow frame? A shallow one, except with chaff hives, with surplus room.

Will it pay to raise any crop for honey alone? If so, what? Yes, if one has cheap land. Alsike, buckwheat and rape are good, as these are also valuable seed crops; and sweet clover in places where it succeeds well.

Shall we use more than a starter of foundation in sections? Starters only.

What is the best method of extracting and clarifying wax? Using the solar wax-extractor, as it extracts cleanly and partially bleaches the wax.

Adjourned until 9:30 a.m. on Aug. 19.

FORENOON SESSION.

Questions were continued as follows:

Which is the most profitable, to produce comb honey at 10 cents per pound, or extracted at 5½ cents? Mr. Robt. Quinn said that he would rather produce extracted honey at 5 cents than comb honey at 10 cents per pound.

Is there any such a thing as bees becoming honey-bound in the brood-chamber? Yes.

How near the bottom-board should the brood-frames come? C. P. Hunt said ¾ of an inch, while others thought ½-inch enough.

Which is the best, loose or tight bottom-boards? Loose boards.

What should be done with partly filled sections when bees swarm and leave them? Some let them be on the old hive, while others take them and put them on the hive of the new colony.

AFTERNOON SESSION.

Is it profitable to extract from the brood-chambers? Not as a rule.

Will not hives filled with combs built from comb foundation stand more heat than natural combs? It was generally thought they would.

Are bees taxable property? No.

Which is the best race of bees, all things considered? Italians.

How close to the cellar bottom should hives rest in winter? From 2 inches to 1 foot.

Fifteen members reported 1,150 colonies, fall count, 875 spring count, and 1,308 colonies as their present number. The amount of comb honey reported as being produced by these colonies was 55,500 pounds, and 16,700 pounds of extracted honey. It was stated that nearly the entire crop has already been disposed of at reasonable prices.

It was decided that the next meeting be held at Vinton, Benton county, Iowa, on Dec. 7, 1886.

The following resolutions were adopted, after which the convention adjourned:

Resolved, That we, the members of this association, tender a vote of thanks to Mr. Jerry Mosher, for his kindness and the use of his office; and

Resolved, That the members of this association approve of the "Bee-Keepers' Union," and most respectfully urge bee-keepers of Iowa to become members of it.

H. E. HUBBARD, *Sec.*

Farm, Stock and Home.

How to Get a Large Surplus.

F. A. TICKNOR.

Now that the season is about closed, and another years' experience is added to our knowledge of bee-keeping, perhaps a few reflections might be in order. If the apiarist has not received 150 pounds of surplus from each colony, spring count, and 100 per cent. increase, he surely does not belong in the front rank.

But little rain has come to us the present summer, still those slight refreshing showers from time to time have been sufficient. Our rich dark soil has stood boldly up against all obstacles, and brought forth her increase; again demonstrating to those who love bees that they are blessed by living in *the* honey-State of the Union. But still much depends upon the apiarist and his observance of natural law. Different locations and forage bring different results and experiences.

Some may ask how must it be done? The first answer would naturally be, rear worker-bees where, if left to themselves, drones are produced; to accomplish which, see that all brood frames contain worker combs. No fear need be entertained of lack of drones for all practical purposes. A second answer is, to restrict swarming, and keep at all times during the honey-flow large colonies of worker bees free from the swarming fever, and but little honey in the brood-frames. To accomplish this there are many ways. I have not yet reached a settled system, and will simply leave it for those to answer who know. It now appears to me a subject for a volume.

During the preparation of the brood-combs and spring management, I clipped the wings of all the queens two years old. and any others not bearing an extra record; when they issued with their swarms they were easily found upon the lawn in front of their hives, and were quickly killed, the swarm of course returning to its old hive, and there remaining and doing considerable work in completing the partly-filled sections, until led off by the young queen, usually about ten days after killing the old one. During this ten days the increase of the colony by hatching brood brings a much larger swarm than would have been received if the first issue had been hived; you have the first and second swarm in one, led off by a young queen.

Now hive the swarm upon empty frames prepared with heavy foundation starters; in one week remove all new combs and replace with empty frames as above. The young queen will now commence to lay and the bees will build mostly worker combs as fast as they are wanted by her.

The sections should now be placed upon the hive, and plenty of them. Extract the combs removed, cut them out for use as starters in the sections. Cut all but one hatching queen-cell from the old colony, and in one week, examine the combs for the young queen, and, if laying, extract all the brood-combs. But little brood now remains unhatched, and is all firmly sealed, and is the only practical time of the season to extract the brood-combs. Should no increase be desired, while the swarm is out, cut all queen-cells, extract the combs, and return the colony to the old hive, tiering up with sections.

Austin,⚲ Minn.

For the American Bee Journal.

Bee-Lawsuit—Buckwheat for Honey.

T. F. KINSEL.

A few years ago a case like this occurred three miles from here: A party owned a colony of bees (having paid $10 for them), which was left on the farm of another. This latter farm was rented to an intemperate man, who was some annoyed by the bees. The owner of the colony neglected to move them, and the renter took them to the road (a few rods away) and burned them. He did this in the evening when all the bees were in the hive. A lawsuit was the result, by which the man who burned the bees had to pay $10 for them, and the costs of said suit, which amounted to $100 in all. The case was ably argued, so you see that the officials of Richland County, Ohio, have some respect for bees, and considerable regard for their legal rights.

I have learned by dissecting, that bees carry honey and *pollen*, at the same load, from buckwheat, and that they work on it only in the morning. There is not a bee to be seen on the buckwheat blossoms in the afternoon. Will this pollen injure the bees? Will it militate against wintering? Will some one who knows, answer these questions? This buckwheat (4½ acres) is 14 rods from my apiary, and early in the day it is literally swarming with bees, loaded with pollen and honey, as far as I have tested the matter by dissection of bees. If pollen is injurious, what shall I do?

So far the bees have only stored surplus in colonies run for extracted honey, but the combs in the brood-chamber are very full of brood, nearly 5 to 6 frames in a 10-frame Simplicity hive. There certainly will be no lack of young bees to go into winter quarters if there is any good in this fact.

All honor to the "Query Department" in the BEE JOURNAL. It alone is worth the price of the subscription. A bee-keeper, however, in adopting another's opinion or plan, should never forget that we have a large country, and that a course pursued successfully with bees in New York by Mr. Doolittle, *might* fail entirely in Texas, though carried out to the letter.

Shiloh,♁ O., Aug. 30, 1886.

For the American Bee Journal.

Native Bees of Ceylon.

J. H. ANDRE.

Volume XXI of the BEE JOURNAL mentions at different times a race of foreign bees, by some person who has seen them in their natural state. I cannot give their names, etc., but in "Rifle and Hounds in Ceylon," a book of sports of 40 years ago, the author, Sir Samuel Baker, drops out of his regular line of elephant, buffalo and elk hunting, at times, and in one instance gives a short sketch of the native bees, which I doubt not are the same as mentioned in the BEE JOURNAL; and thinking that many would be interested, I have copied the part referring to the bees, and will let the Englishman tell his own story:

"The principal underwood in the mountainous districts of Ceylon is the nillho. This is a perfectly straight stem from 12 to 20 feet in length, and about 1½ inches in diameter, having no branches except a few small arms at the top, which are covered with large leaves. This plant, in proportion to its size, grows as close as corn in a field [We doubt not but what the author means grain, as that is their national style to speak of all kinds of grain, such as wheat, oats, barley, etc., as "corn"], and forms a dense jungle difficulty to penetrate.

"Every seven years this nillho blossoms; the jungles are then neither more nor less than vast bouquets of bright purple and white flowers. The perfume is delicious, and swarms of bees migrate from other countries to get their harvest of honey. The quantity collected is extraordinary. The bee-hunters start from the low countries and spend weeks in the jungle, in collecting the honey and wax. When looking over an immense tract of forest from some elevated point, the thin blue lines of smoke may be seen rising in many directions marking the sites of the bee-hunters' fires.

"Their method of taking the honey is simple enough. The bees' nests hang from the boughs of the trees, and a man ascends with a torch of green leaves which creates a dense smoke. He approaches the nest and smokes off the colony, which, on quitting the exterior of the comb, exposes a beautiful circular mass of honey and wax, generally about 18 inches in diameter, and 6 inches thick. The bee-hunter being provided with vessels formed from the rind of the gourd attached to ropes, now cuts up the comb and fills his chatties, lowering them down to his companions below. When the blossom of the willow fades, the seed from this is a sweet little kernel with the flavor of a nut. The bees now leave the country and the jungles suddenly swarm, as though by magic, with pigeons, jungle-fowl and rats. At length the seed is shed and the nillho dies. The jungles then have a curious appearance. The underwood being dead, the forest trees rise from a mass of dry sticks like thin hop-poles. The roots of these plants soon decay, and a few weeks of high wind howling through the forest, levels the whole mass, leaving the trees standing free from underwood. The appearance of the ground can now be imagined. The young nillho grows rapidly through this, forming a tangled barrier which checks both man and dogs."

Lockwood,♀ N. Y.

Local Convention Directory.

1886. *Time and place of Meeting.*

Sept. 16.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburg, Ind.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM
OUR LETTER BOX

Using Separators.—R. S. Becktell, Three Oaks,♀ Mich., says:

On page 555, Mr. F. J. Crowley says: "One prominent in our bee-associations, and living near me, who was not in favor of separators, has a nice mess; the combs are all bulged," etc. It is quite evident that the man was not a practical bee-keeper, and that he used the old style of 2-inch wide sections. I have been using 1-pound sections 4⅝x4⅝x1½ inches, for the past four years, without separators, and not one comb in 100 could be called bulged. I have 10,000 of them full of clover and basswood honey, and I would not go back to the old style.

Bees Hanging Out.—W. M. Barnum, Angelica,♀ N. Y., on Aug. 25, 1886, asks the following questions:

1. Will you kindly give the address of the *British Bee Journal*, and is it a weekly or monthly? 2. One of my colonies seems persistent in hanging out of the hive. I have been noticing them for a week or two, and I think that most of them lay out at night. What is the trouble with them?

[1. The *British Bee Journal* is a weekly, published at $2.50 a year. We club it and the AMERICAN BEE JOURNAL for $2.75 a year.

2. This is not uncommon. The bees are numerous, the breeding apartment full of brood and honey, and there is but little or nothing in the fields to gather. There is therefore nothing for them to do.—ED.]

Keeping Bees on Shares, etc.—E. S. Hildemann, Ashippun,⊶ Wis., writes:

As I had rented my farm and had not bees enough of my own, I took 3 apiaries on shares, one apiary of 6 colonies, one of 9, and the other some 30 colonies. The one of 6 colonies, of which I took particular account, had one queenless colony, and a very few bees in it at that. I gave it brood from which to rear a queen. I obtained from the 6 colonies 140 pounds of comb honey, and 610 pounds of extracted, in all 750 pounds. I have 28 colonies of my own. I got of white clover and basswood honey, of mine and my share, 2,000 pounds, which I retailed at the following prices: Ten cents per pound, or 11 pounds for $1, and 50 pounds at 8 cents per pound. Comb honey I sold at 12½ cents per pound. All of it I sold in one town. By this way I saved all of my honey-kegs, which I can use another year. My honey was well ripened, consequently it was well liked, and I always have calls for more. We have had some honey-dew this year, but not as much as last year. I have noticed some honey-dew on poplar leaves near lakes and rivers, which is so thick that it will not come out by extracting.

Bee-Keeping in Oregon, etc.—Gust Murhard, Portland,⊸ Oreg., on Aug. 27, 1886, writes:

The honey yield in Oregon and Washington Territory is an entire failure this year. The season opened well, and everything was most promising, when the drouth set in and cut everything short. Unless many bees are fed they will have to die of starvation, and many have already left their hives in despair. I have just received a Cyprian queen mated in Carniola with a Carniolan drone, to try the crosses between the Cyprian and Carniolan bees, to compare them with the crosses between the Mt. Lebanon and Carniolan bees, which have proved so satisfactory to me. The Cyprian bee seems the favorite of European bee-keepers, and also of Mr. Benton. I have two objections to the pure Cyprians, viz., their vicious stinging propensity, and their much swarming. The former should not be any more objection in a honey-apiary, however, than the vicious disposition of a cow in a dairy, if the cow is a No. 1 milch cow. I never had a Cyprian queen from Mr. Benton, and this is the first one for the purpose of cross-breeding. I have received several letters of inquiry from Eastern farmers concerning Oregon and Washington Territory, all of which I have answered cheerfully, with the exception of one from Missouri, which I have not been able to answer because the letter has been mislaid, and I wish through the BEE JOURNAL to ask that the man who wrote the letter, write me again, so as to enable me to answer him.

Silk-Culture and Bees.—H. Fisher, Silk-Culturist, Oshkosh,⊶ Wis., on Aug. 30, 1886, writes:

To those desiring to write to me about the above subject, I wish to say that in order to avoid all mistakes, and to insure a prompt answer, please address me hereafter as stated above. This precaution I deem necessary, as letters that were intended for me (after I had made the few encouraging remarks about silk-culture, on page 490) were delivered to a namesake of mine.

Report, etc.—E. Jarvis, Fair Grove, ⊶ Mich., on Aug. 28, 1886, writes:

Bees did well here this year, especially in early swarms, and a dry July gave them rest, but they held their own, and now with the showers we have recently had, colonies are strong in bees, and are filling up the hives fast with brood and honey. On page 538 it is requested to state our experience with "removing young bees" from the hives. I saw a bee drawing out another, and my first impression was that of war, but I saw no fighting. I could not tell which was the youngest, or the most perfect bee. This continued more or less for 2 or 3 weeks in July.

Non-Swarming Hive, etc.—V. W. Clough, Geneseo,⊸ Ills., on Aug. 27, 1886, writes:

I am a constant reader of the BEE JOURNAL, and I often wish I was a writer, for I could tell a very interesting story regarding my experience with bees. I started with 14 colonies, only 10 of which were very strong. I bought my bees from my father, who, after 25 years' experience with bees and general farming, wished to retire from active business and move to town. From the 14 colonies I have secured 1,200 1-pound sections of comb honey, with an increase of 8 new colonies, all of which have filled the brood-chambers besides filling 125 sections of nice honey. I have one hive that I consider very valuable. I do not know who made it, or what its name is, but for the last three years I never knew its colony to swarm, but it would fill with honey all the space given. I believe it to be a non-swarming hive. This year that colony has already filled 220 sections, and I do not know how many more it will fill by the end of the season. I believe, though, that it will fill 40 more, because I have just given it a case of 40 sections, and the bees have gone into them just as they do in the spring when everything is in bloom. This colony is at work all the time while the others are doing comparatively nothing. I believe in order to get a large flow of honey we must have a strong colony and the right kind of a hive. I get 13 cents per section, or two for 25 cents, for all of my honey here at home. I would not keep bees to produce extracted honey.

Bees Working Vigorously, etc.—R. F. Holtermann, Brantford, Ont., on Aug. 28, 1886, says:

In my letter regarding the sources of honey-dew, page 539, the 23rd line should read: The theory that such a substance is excrement from aphides *alone*, etc. It will be seen from what follows that this is as it was intended. Bees are working vigorously on buckwheat, mullen, etc. I have secured from the first and thistle sufficient to give me 40 pounds per colony, spring count; and bees are in very fine condition. Upon extracting, the yield may prove to be more. I secured 80 pounds per colony from clover.

Fall Honey Crop, etc.—A. M. Gander, Adrian,⊸ Mich., on Aug. 26, 1886, says:

Bees are getting some fall honey in this locality at present. The crop of white honey was fair, but not a full one. I would as soon think of living without working as to get along successfully with bee-keeping without my bee-papers. It would be like groping around in the dark.

One of the Bonesets.—J. P. Cedarholm, Galesburg,♀ Mo., writes:

I send you some leaves and blooms of a honey-plant that has yielded plenty of honey this season. Please give its name.

[It is one of the "bonesets," and yields rich golden nectar.—ED.]

Wintering Bees.—W. F. Smith, Dutton, Ont., writes:

About March 7, 1885, I wrote to the BEE JOURNAL, saying that I had constructed a winter hive embracing the seven requisites named in the book, "Bees and Honey." I had at that time 24 colonies in these hives, but I could not tell at that time, of that the severest winter ever known in this country, how they would come out in the spring, so I said nothing about their condition, but every colony came out nicely in the spring, not even one queen being lost. I also wintered 24 colonies last winter in the same hives, and they all came through in good condition, dry and clean. Neither winter seemed to have any effect upon the bees. I thought at that time I would get it patented, but I changed my mind and thought I would test it a few winters, and if it proved good I would let the bee-fraternity have the benefit of it. I am satisfied with these two winters' tests that I can winter bees in these hives with the same safety and certainty that cattle can be wintered in good stables. I intend to winter 36 colonies in these hives the coming winter, and I have not the slightest doubt that they will come out in the spring all right.

Peculiar Queen.—H. E. Hill, Titusville,⊸ Pa., on Aug. 27, 1886, writes thus:

I send you a piece of comb cut from a hive having a young queen that commenced laying on Aug. 14. She is working on two combs only, leaving the others, which are perfect brood-combs, without any eggs, while those two have many cells without eggs; other cells contain from 10 to 15 eggs. Some cells have 3 or 4 hatched larvæ and several eggs. The queen is ordinarily large, and is "losing her feathers," which is evidence that the bees are displeased with her in some way. What is the cause?

[Such cases have not been unknown. I have experienced two or three during 18 years, and the ownership of thousands of queens. It seems to be an effect of abnormality in the queen. Why it is so I do not know.—JAMES HEDDON.]

The Season—Stealing Bees.—Mrs. C. M. Kingsley, Elvaston,+○ Ills., on Aug. 27, 1886, says:

We had a favorable spring. My June crop was 50 pounds per colony. Then came the long-continued drouth, and bees were idle for some time; but recent rains have set them to work again in good earnest. On Oct. 22, 1885, a lover of honey came in the night and carried off one of my bee-hives, bees, honey and all. It was full of honey. I can get no clue to the thief, but if I ever should, it is likely he will have to pay for that joke.

Bees in a Glass Globe.—11—John Rey, (68—100), East Saginaw,⊙Mich., on Aug. 26, 1886, writes:

I read an article in *Gleanings* for Jan. 15, 1886, on "Upper absorbents, or can bees winter in open-mouthed bottles?" I thought I would try it, but I could not get a bottle large enough for a colony of bees, so I got a glass globe 18 inches high, 14 inches long, and 8 inches wide. (It is a regular flower vase.) I then made a bottom stand, with entrance in under the bottom-board ½x6 inches, and then I nailed in 2 frames filled with comb foundation, and one with brood, and put the glass globe over them. Over the glass globe I put a wooden box. Everything is dark on the inside. I then put a swarm of bees in it that had just issued, and I expected that they would come out again, but they did not; they went right to work just so if they seemed to like to live in a glass hive. I put them in on Aug. 16, and they are building comb nicely. The queen is laying finely. There is a clear space of 6 inches from the top of the frames to the top of the glass globe, and the bees could not hang in a cluster to build comb downward, so they are building comb upward. I think they will winter all right.

Pollen in the Sections.—B. Losee, Cobourg, Ont., says:

In Query, No. 295, it is desired to know how to keep pollen out of the sections. Dr. G. L. Tinker says it seems that the zinc queen-excluder is no hindrance to the carrying above of either honey or pollen. Mr. J. E. Pond, Jr., says: "I would like to know myself." I would advise using round perforated zinc; it is more porous, and takes off the pollen when the bees pass through it. The openings in the zinc should be the size of a drone's head, allowing worker-bees only to pass. Here bees work when it is 90° in the shade.

The Chapman Honey-Plant.—T. F. Bingham, Abronia,♀ Mich., on Aug. 28, 1886, says:

The new Chapman honey-plant adds a five weeks' honey-flow just after the clover and linden bloom is passed, and before the autumn flowers blossom. The great richness of the secretion of nectar, the opportune period of bloom, and the hardiness and beauty of the plants promise much to the practical honey-producer.

Bee-Keeping in Mississippi.—L. J. de Sobotker, Riverton,+○ Miss., on Aug. 24, 1886, writes:

The weather is very hot and sultry, and the bees are hanging out again, although all the precaution had been taken as advised by our most practical and experienced apiarists in the United States, in Query, No. 286; especially Mr. H. R. Boardman's answer. I put honey in the open air, and was extracting with the honey-house wire-screen door and window open, but no bees troubled me or the honey. I have a couple of nuclei building up into colonies that are never idle; this proves that there is honey, or rather nectar, in the corn and cotton bloom around us, even in the heat of the day. We expect to work with honey until frost comes; several minor fall flowers are in bloom, which will last until that time.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 7 a. m., Sept. 6, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—It continues to arrive very freely The demand is light and sales are made chiefly at 12@13c. Extracted is also quiet with prices unchanged, 6@7c.

BEESWAX.—It is easier, and 23c. is about all will bring.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for the new crop of comb honey is just opening. We note an improvement in sales and prices. Most of the comb that has arrived is badly colored, which makes it second grade, which we suppose is due to a poor season and long finishing. We quote 1886 crop as follows; Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—The market is improving. The demand is better and the prices are also improved. Best comb in 1-pound sections brings 14@15c.

BEESWAX.—Firm at 23c. for fair quality.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—The market is very quiet. Demand from manufacturers is slow, and there is only a fair trade in new comb honey and extracted in square glass jars. Extracted honey brings 3 1-2@7c.; comb honey, 12 to 14c. for good to choice, in the jobbing way. Prices are low for all produce and no speculative feeling is noticed anywhere. Unless better prices are realized for other produce, prices of honey are not likely to advance.

BEESWAX.—It is in good demand and arrivals are fair. We pay 20c. for good yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The demand for honey is not very lively at present, but prices are steady. Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is active and sales of the comb are large. Extracted is firm with no stock in the city. We quote: One-pound sections of white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 8@10c.; 2-lb. Calif. white sage, 10@11c.; dark 2-lbs., 8@9c. Extracted white clover, 7@8c.; dark, 4½@5½c.; Calif. white sage, 5½@6c.; dark, 4½@5c.

BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is about the same as when last reported—may be quoted a little lower to sell. Choice comb in 1-lb. sections, 12@13; 2-lbs., 11@12½ cents; dark not wanted. Extracted, white, in kegs, 6@6½c.; same in tin cans, 6 1-2@7c.; dark in barrels and half-barrels, 5@5 1-2 cts.

BEESWAX.—No demand.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The demand for honey remains very good for fine qualities, and they are readily taken for home consumption, and shipments to Europe and the East at 4@5¼c. job here. Most of the honey is held at 4½c. and more, and it seems that sooner or later such prices will be paid, as offerings are rather small. Comb honey is not sought after so far, but with the colder weather more demand will come in, and as supplies are rather small, we anticipate full prices. We now quote 7@10c., as to quality, wholesale.

BEESWAX.—It is dull, but buyers have to pay 22@23c. for choice lots.

SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Prices are so low that honey-producers are holding back their product; still the market is well supplied. We quote: Comb, extra white, 8½@10c.; off grades, 6½@7½c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.; dark, 3c.

BEESWAX.—22½@23c.

O. B. SMITH & CO., 423 Front Street.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at $6.00 each.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructible. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
The 6 above-named papers	5 50	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

Italian Queens.—We have a few untested queens which we can send by return mail. Three for $2.75; six for $5.00; twelve for $9.00. For Tested, double the prices.

"Cash in Advance" is the rule, but no longer than six months of grace can be allowed on the small sum of one dollar. Subscriptions may commence at any time, and discontinuances may be ordered at any time when arrearages are paid up.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

System and Success.

☞ All who intend to be systemstic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

When Marketing Extracted Honey, it is a sad *blunder* to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "It is not convenient for me to send the money now to renew my subscription. It runs out with this month; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

5,000 **LBS. Extracted Linden** and **White Clover Honey for Sale.** What do I hear bid? Honey of good quality.

Address, **J. R. MURRAY**, ADA, O.
36A1t

Bees for Sale.

50 COLONIES of **Italians** in 11-frame Langstroth HIVES, with nearly all young Queens. Will sell at once at **$4.00** per Colony—as I am going to Nebraska. **L. ADAMS,**
36E3t MAYFAIR, Cook Co., ILLS.

BEES and HONEY for SALE.

I **OFFER** to sell Good Full Colonies of Hybrid Bees at **$4.00** per Colony; 50 or more at **$3.50** per Colony. **HONEY** for Sale at 12½ cts. Call on or address,

R. S. BECKTELL,
36A3t THREE OAKS, MICH.

$5.00 **PER COLONY** for **ITALIAN BEES** in 10-frame hives (frames 9⅛x17⅝). All in good condition. **Tested** Italian Queens at $1.25; Untested Young Laying Italian Queens at 70 cts. each.

OTTO KLEINOW, DETROIT, MICH.

I **WISH** to purchase for cash, 2,000 pounds of Extracted Honey, and 1,000 pounds of Comb Honey of good quality. Correspondence solicited and reference will be furnished.

C. W. DAYTON, Bradford, Iowa.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

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The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

W. Z. HUTCHINSON,

Is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows: Single Queen, $1.00; 6 Queens for $5.00; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound), Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.

W. Z. HUTCHINSON,
8Etf ROGERSVILLE, Genesee Co., MICH.

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece,
V-Groove, $4 per 1,000
Less for lots of 10,000

40c per lb. for heavy.
50c " " light.
Send for Samples and Price-List.

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DEALERS IN
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ATTENTION, BEE-KEEPERS!!

NOW is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates: 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
32Atf COLERAINE, MASS.

Golden Italians.

WARRANTED **Queens** 75 cts. each; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,

JAMES WOOD, North Prescott, Mass.
20A20t

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

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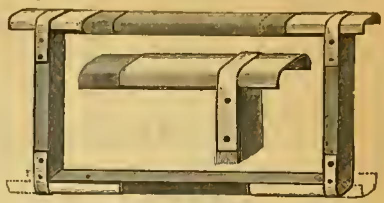
Metal Reversible Frame Corners.

ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.



Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. **F. M. JOHNSON,**
WASHINGTON DEPOT, Litchfield Co., CONN.
32Atf

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

FREE! New Book of Fancy Works with **100** Illustrations, **150** New Stitches, **10** Special Offers, **200** Picture Bulletin 48-col. story-paper, all for **4c** postage.
National Bazar, 7 W Broadway, N. Y.
33A13t

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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923 & 925 West Madison Street, CHICAGO, ILL.

TEN VALUABLE BOOKS FREE!!

The Publishers of **City and Country**, a twenty-eight page publication containing from twenty-five to thirty illustrations in each issue, in order to increase its circulation, make the following unparalleled offer for the next few weeks: To everyone who will remit by **Postal Note** the amount of the regular yearly subscription—fifty cents—they will send postpaid any **ten of the books** in the list below and City and Country for one year. These books are published in neat pamphlet form, many of them **handsomely illustrated**, and all are printed from **good type upon good paper**. They treat of a great variety of subjects, and we think that no one can examine the list without finding therein many that he or she would like to possess. In cloth-bound form these books would cost **$1.00 each**. Each book is complete in itself.

1. **The Widow Bedott Papers.** This is the book over which your grandmothers laughed till they cried, and it is just as funny to-day as it ever was.
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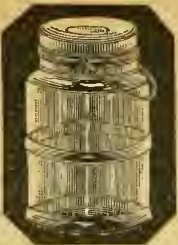

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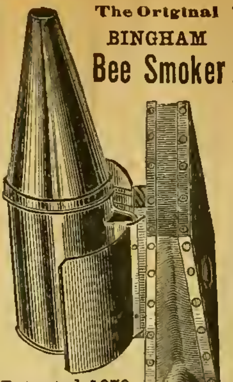

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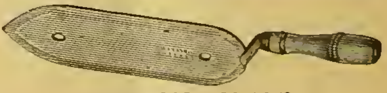

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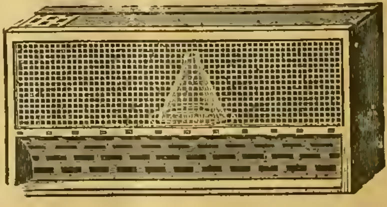

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Sept. 15, 1886. No. 37.

What the Bees Sing.—In that excellent monthly, *Vick's Illustrated Magazine*, M. E. Whittemore gives the following as a reply to the question :

The bees are ever busy,
They work the whole day long,
Humming often to themselves
This soft, low, happy song :

"We gather from the flowers
Sweet honey as we fly,
And store away this treasure
For winter by and bye.

"We work for one another,
Nor leave our task undone,
But toil from early morning
Until the evening sun."

Let us then learn the lesson,
Fill each hour of the day
With kindly words and actions,
While passing on our way.

◆

Bees are at Work now on the bloom which has resulted from the late rains.

◆

Sweet Clover.—Concerning this excellent honey-plant, Prof. Cook, in the *Prairie Farmer*, remarks as follows :

Having grown sweet clover for several years I know that it is beautiful, both in foliage and blossom. It is much superior as an adornment of the roadside to either rag or May weed. It is a most excellent honey-plant, comparable to white and Alsike clover, or to basswood in value. It is slow to expand, and in meadow and pasture is soon choked out by our cultivated grasses. When once in possession of a spot, it is easy to extirpate it if it is desired to do so. As is well known, sweet clover is a biennial, and so must come from the seed once every two years. The plants grow from seed one year, and the next year blossom and die. Thus we have only to cut the plants while in bloom before the seed matures to extirpate the plants *in toto*. Two such cuttings in adjacent years will do the work most thoroughly.

In view of all these facts we can hardly find a more safe and valuable plant for waste places, and for roadside planting. Farmers should encourage its growth both for its beauty and worth.

The seed will grow if planted at any season of the year, but if sown early in the fall, it will come up this year, and bloom next year. Or it can be sown later, even on the snow in winter, and will thrive and do well.

The Illinois State Fair is over. It was a fine show of almost everything except bees and honey. Of bees there were none on exhibition ; a fine opportunity was lost to bring honey prominently before the many thousands of visitors to the Fair.

Of honey there were only four entries. Mr. J. V. Caldwell, of Cambridge, Ills., had 10 crates of 1-pound sections of nice comb honey, which took the first prize, $8. Mr. H. S. Hackman, of Peru, Ills., had 5 crates of 1-pound sections (two tiers in a crate), and 4 crates of 2-pound sections of honey ; this took the second prize. Mr. Hackman also exhibited 18 glass jars of honey ; this took the first prize on extracted honey. This was all the exhibits except a box, 1 foot square, containing 5 frames, with combs built in every direction—a disgrace to the intelligence of the 19th century, and an insult to the Illinois State Fair.

When prizes are offered, space provided, and an invitation given to bee-keepers to make an exhibit of bees and honey, and still no more than the above named are entered for exhibition, what premiums can we expect in the future? There should have been ten thousand pounds of honey on exhibition, at least ; and a good bee-show besides. The publishers of the BEE JOURNAL made no display on account of the editor having been appointed a judge, and to encourage producers of honey to make a good exhibit ; but we think it will be different another year.

◆

Teasel.—Many inquiries are made regarding this plant, and in order to answer them all at once we will state some facts concerning it. The fuller's teasel (*Dipsacus fullerorium*) is used in fulling cloth, and the heads may be seen in woolen mills arranged on the surface of large cylinders, over which the cloth passes. Wild teasel (*Dipsacus sylvestris*) is a troublesome weed in some localities, and may be recognized by the following characteristics :

It is a biennial herb, stout and coarse, growing from the seed the first year without flowers, the root living over winter, producing flowers and seeds the second year, after which the plant dies. It is prickly throughout on stems and leaves Few of our herbaceous plants have prickly stems. The leaves are oblong, lance-shaped, much longer than broad, tapering but slightly upward, attached directly to a stem without leaf-stalks. They are opposite, in pairs, on the stem, and their bases often are united around it. The flowers are small, pale purple, many collected together in a dense egg-shaped cluster or head, similar in structure to the heads in the composite family, to which the teasel family is related. Within the cluster, by the side of each small flower, is a scale which tapers to a slender point, projecting beyond the flower, so that the head is bristly all over. At the base of the head, outside, is a circle of stiff leaves forming an involucre, projecting and curved upward. They are of unequal length, and prickly like the stem.

◆

It Pays.—The Fremont, Mich., *Indicator* of Sept. 2, makes the following remark concerning one of the citizens of that town, who is well-known to our readers :

George Hilton contemplates adding considerably to his apiarian facilities. His "plant" has become one of the important industries of our town.

◆

Honey from the fall bloom is reported to be coming in quite freely in some localities.

Bees as Missionaries.—One of our exchanges makes these very sensible remarks concerning the "mission of bees" in nature, and the value of bees to the various branches of horticulture :

The bee is almost as much a part of choice fruit and beautiful flowers as the branches upon which they grow. The flower with its honey and the bee are factors in one of nature's most beautiful and interesting problems, and through the intricate workings of this problem are born the brightest colors, finest perfumes and richest flavors. Countless flowers are fertilized by the bee, which would otherwise perish from the earth ; but it does more than this, it carries pollen of self-fertilizing plants from flower to flower, thus preventing constant in-breeding and consequent deterioration. In fact the bee is nature's protest against incest : and by resultant products of superior beauty and flavor, when the protest is heeded, teaches a powerful lesson on the great subject of the proper and healthful propagation of species. Where bees are not, fruit and flower show the effect of a violation of a law of nature by slowly but surely degenerating. The bee is as necessary to the flower as the flower to the bee : in conjunction a harmony is produced which results in more brilliant colors, in sweeter flavors and richer perfumes to regale the senses of man.

◆

Sweet Clover for Honey.—Mr. G. W. Demaree, of Christiansburg, Ky., in an article on the "Bee-Forage of Kentucky," published in the *Bee-Keepers' Magazine*, remarks as follows :

For cultivation as a honey-plant, under proper management, sweet clover is the promising plant. In this locality it will not succeed in waste places. The plant is too feeble when it first appears above the ground to hold its place among the weeds indigenous to the soil, but when the plants once get of some size they will crowd their way and grow rapidly. In favorable places I have seen the plants grow 10 feet high, throwing out numerous branches, all thickly set with spikes crowded with delicate little white flowers. My "patch" of sweet clover this season was a perfect wonder of swarming bees, crowding each other like robber bees contending for illegitimate gain. I have had best success with it when sowed in the early spring with oats. It will bloom the following year just as does red and Alsike clover, and if left to itself it will bloom at the same time that white clover does, and it will be of little advantage to the bees, as they have all that they can do to gather the white clover harvest. To retard its growth and make it succeed the white clover bloom, the sweet clover should be grazed lightly by sheep or young cattle when it is about 12 inches high. This will cause the plants to throw new shoots that will bloom later in the season than they otherwise would. I now have some plants in full bloom that have been browsed and nipped by some Jersey cows all spring and summer. Alsike clover yields nectar profusely, but its bloom is short-lived, and I have failed to so manage it as to have it bloom at any other time than when white clover was at its best.

◆

Round Trip Tickets to the Convention.—As Manager of the National Bee-Keepers' Union, we have made arrangements with the Indianapolis lines of railroad for round trip tickets from Chicago to Indianapolis and return to Chicago, good from Monday to Saturday, Oct. 11 to 16, 1886, for $7.30. The fare one way is $5.50, and this is one fare and one-third. To obtain these tickets, it will be necessary to get a certificate signed by Thomas G. Newman, stating that the bearer is *entitled* to the reduced fare. Now, do not wait until you come to Chicago to get this certificate, for we may have gone before you come. Send for the certificate at once ; and it will be sent by return mail.

QUERIES
AND
Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Second-Swarms.

Query, No. 304.—Suppose a colony is ready to send out a second swarm, or will be ready in a day or two. If all the immature queen-cells are destroyed, and the young queens just gnawing out are liberated, so that two or more young queens are in the hive, but no queen-cell, will the bees swarm?—S. J. M.

Yes, sometimes.—DADANT & SON.

Not generally. I have had one or two do so.—G. M. DOOLITTLE.

I have never tried it, but I think they would not swarm.—W. Z. HUTCHINSON.

I should expect they might.—A. J. COOK.

I am not sure, but I think that the bees will rarely, if ever, swarm.—C. C. MILLER.

Yes, in many cases, unless all virgin queens are killed but one.—H. D. CUTTING.

As a rule, yes. The safe plan if desired to prevent the second-swarm, is to remove all queen-cells and all queens but one.—J. E. POND, JR.

No. It is the queens piping in the cells that causes all second-swarms. Cut out all the queen-cells, and if there be a half-dozen young queens just hatched, there will be no swarming.—G. L. TINKER.

They will swarm in the majority of cases. Not only this, but often when all the queen-cells are destroyed or removed when the colony is on the verge of swarming, and all the hatched queens removed but one, the bees, not all knowing the destruction of the cells, will issue with the only queen, leaving the parent colony hopelessly queenless.—J. P. H. BROWN.

I think they will ofttimes swarm. I believe that one of the reasons why parent colonies are so much oftener found queenless than are second-swarms, is because in many cases all the queen-cells are hatched, and all the young queens go with the after-swarms.—JAMES HEDDON.

Sometimes they will and sometimes they will not—generally they will, so far as my experience goes. I have this state of things under my observation frequently. I have picked a virgin queen from among the bees which were clustered outside of the hive when there was one or more queens guarded on the inside. I have had swarms lately hived to swarm out and settle in the usual way because there were two or more virgin queens with the swarm. Those persons who claim that bees never swarm except when they have a queen-cell or queen-cells, are mistaken.—G. W. DEMAREE.

Prevention of Absconding Swarms.

Query, No. 305.—My business requires me to be absent from my apiary until about 3 p.m. each day. What system had I best pursue to prevent my swarms from going to the woods? My apiary consists of 25 colonies.—Pa.

Practice dividing colonies.—J. P. H. BROWN.

I should increase the colonies by division in this case.—G. M. DOOLITTLE.

I think by dividing you would have the least trouble.—H. D. CUTTING.

It is not yet known—at least not by me.—JAMES HEDDON.

Produce extracted honey, and thus almost totally prevent swarming.—DADANT & SON.

Clip the queen's wing, and keep a sharp lookout. I am in the same condition, and very rarely meet with any loss.—A. J. COOK.

An apiary of that size will pay to employ an assistant to hive the swarms. Let the bees swarm naturally for best results.—G. L. TINKER.

Use Alley's drone and queen trap to catch the queen, and return the swarms, and then if you desire increase, divide.—H. R. BOARDMAN.

Have the queen's wing clipped, and a boy or girl can cage them when swarms issue. Perhaps Alley's trap would answer as well.—C. C. MILLER.

Use "Alley's queen and drone trap," and make your increase by dividing on the nucleus plan. Your case is my own, and by following the advice I have given I do not have any trouble in this direction.—J. E. POND, JR.

Produce extracted honey and you will have few swarms. You might try clipping the queen's wing, but as you would not be there when the bees swarmed, I fear the "remedy would be *worse* than the disease." Dividing *may* help you, but the probability is that the bees will try *their* hand at it after you get through. Why not give up your "business" and embark in bee-keeping?—W. Z. HUTCHINSON.

Alley's drone and queen trap would likely help you out of the trouble. To clip the wings of your queens would prevent the bees from absconding, but should the swarming impulse become rampant, all your queens with clipped wings would soon be lost or killed by the bees, and second or after swarms would begin to issue, and very soon your apiary would be utterly demoralized. I do not see how an apiary is to be managed without the presence of some one in swarming time.—G. W. DEMAREE.

Increase or no Increase—Which?

Query, No. 306.—In my locality I count on no surplus after clover, which ends in July. Will a colony that swarms, with its increase, or the same colony without swarming, give me the larger crop of comb honey?—M. E. W.

I *think* that the colony without increase will produce the most.—C. C. MILLER.

The first usually, I think.—A. J. COOK.

I think the colony that does *not* swarm will give the most surplus.—W. Z. HUTCHINSON.

I should think that the colony without swarming would give you the greatest yield of comb honey.—H. D. CUTTING.

The colony that does not swarm will give the most, usually.—DADANT & SON.

The colony that swarms, with its increase, will, with proper management, give the largest yield of surplus comb honey.—H. R. BOARDMAN.

Without knowing anything about your location, I will venture to say that with *one* increase and the parent colony, you can get more comb honey than if no increase.—J. P. H. BROWN.

If your swarm issues early enough so that both the swarm and the parent colony will be well stocked with foragers, more honey will be gathered than if no swarming is allowed; otherwise, the contrary.—J. E. POND, JR.

If a colony would work contentedly no increase would give the best results; but as nine out of ten will be kept from increase only at a loss, I should prefer to let one swarm issue from each old colony, and treat them as I described in Query, No. 302.—G. M. DOOLITTLE.

From the description you give of your locality, it is similar to mine as pertains to the surplus honey season. In my locality a colony of bees that does not swarm—all things else being equal—will store more surplus honey than any colony with its increase.—G. W. DEMAREE.

With proper management the colony that swarms will produce more comb honey than a colony that does not swarm, provided the flow of honey lasts more than 21 days. If of short duration, then the colony that does not swarm will produce the most.—G. L. TINKER.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; `O northwest; O‐ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Sun Wax-Extractor.

G. W. DEMAREE.

As it would require too much of my time to answer private letters describing the sun wax-extractor as I employ it in my apiary, I will have to ask the permission to publish a minute description of how to make and use the apparatus. I claim nothing in connection with the device excepting the trough-shape wax-pan, or bottom of the wax-extractor. A conversation with Mr. O. O. Poppleton, at the North American Convention in 1881, concerning its use, set me to investigating the matter, and after some experimenting I became convinced that a flat bottom did not drain the wax from the refuse of old and pollen-filled combs as cleanly as economy would dictate. But after making an extractor with a hollow or concave bottom, I found that this objection was overcome and the device was practical for all purposes connected with rendering wax.

My plan of making it is as follows: Make a plain box 19½ inches wide, 14 inches deep, and 35½ inches long, inside measurement. Nail on a bottom and have it bee-tight. Now nail on some legs at the ends, and the box is ready for the wax-pan, etc. To make the wax or draining pan cut a piece of sheet-iron (I prefer sheet-iron to anything else) 24 inches wide and 28 inches long. To get the concave shape of the pan, get out a board from half-inch stuff, 5 inches wide and 19½ inches long, and cut one of its edges to a true circle. Now bend the sheet of metal around the circular board and nail it closely. This gives a concave pan 19½ inches wide by 28 inches long, with one end closed and the other end opened.

To adjust the pan in the box or frame-work, get out a board 7 or 8 inches wide, and 19½ inches long, and hollow out one of its edges to correspond with the circular shape of the pan, and nail it crosswise in the box, so that when the open end of the pan rests on it, the pan will project about 2 inches over the board and be about 6 inches above the bottom of the box. This will give room for the wax moulds under the drip end of the wax-pan. Two beveled strips of wood 28 inches long, nailed one on either side of the box, supports the sides of the metal pan.

When all is ready the wax-pan is shoved down into the box or frame-work until its open end rests in the hollow board, and the sides of the pan on the beveled strips. It is secured in position by nailing through the wooden head of the pan and into the end piece of the box, and the sides of the pan are nailed closely to the beveled strips at the sides of the box or frame-work.

The sash is made like a shallow box 2 inches deep, rabbeted at the top to receive three panes of glass 12x20 inches, and slides back and forward between strips of wood at the sides of the frame-work. Some pressed pans 3 or 4 inches deep and 7 inches wide at the top make good wax-moulds. When one is filled it is shoved aside and another put in its place. The filled pans are left in the box to cool gradually during the night. My wax-extractor is left in the apiary the year around. It has a board cover for it when not in use.

I hope that I have made the matter plain to those who have written to me for particulars, and also to others.

Christiansburg, ♂ Ky.

For the American Bee Journal.

Chapman Honey-Plant in Canada.

WM. F. CLARKE.

I believe mine is the only experimental plantation of the above-named honey-plant in the Dominion. Fifty specimens were sent for trial to myself and to Mr. D. A. Jones, respectively, but unfortunately those forwarded to Mr. J. were overlooked, owing to the carelessness of a teamster, and left in a shed until too late to plant.

My garden-plot being rather limited, I consigned the plants to the care of a friend who is an enthusiastic botanist, and who was formerly a bee-keeper. They have had the best of care, have made a luxuriant growth, and blossomed magnificently The bees began to visit the plant on July 19, when only here and there a flower had opened, and from that day on for upwards of three weeks, frequented it in increasing numbers. When at its best, the blooms were crowded with bees, both wild and tame.

Of course one cannot give an opinion as to the yield of honey from a single season's trial with only a few plants. But we know that bees do not assiduously visit flora out of idle curiosity, and blossoms that are crowded from dawn to dusk must reward the honey-gathering visitants, or they would certainly be deserted. The plant is worthy a place in flower-gardens, owing both to the beauty of the leaf and the peculiar loveliness of the blooms. Judging by its habit of growth, I do not think it will give trouble as a weed. So far as an opinion can be formed on the data furnished by a single season's observation of a small number of plants, it seems to me there is promise enough to justify bee-keepers in going into its culture, at any rate on a small scale, and so subjecting it to a general and thorough test.

Guelph, Ont.

For the American Bee Journal.

Peculiar Experience with a Colony.

MRS. H. A. CUNNINGHAM.

Last July I had a colony made by division, that failed to rear a queen from the cell I gave it, and as I was quite interested in the description of the Syrio-Albino bees, I thought I would try an untested queen of that kind; and accordingly on July 16 I ordered one. On July 22 I received a card stating that it would be shipped on July 26. The colony had then been for some time without the means of rearing a queen, and as the new queen would not arrive for nearly a week, and I wanted a young queen to supersede an old one that I had in another colony, I thought I would let them occupy the time while waiting by making some queen-cells for that purpose. So I gave them a frame containing eggs, and by July 26 they had several started and one sealed. I then formed a nucleus by placing the frame containing the queen-cells, and one more with the adhering bees, in another hive, and placed it about a foot away.

On July 28 the new queen arrived. I immediately removed her to a cage made of wire-netting rolled up, but I was surprised on opening the hive to put her in, at finding a number of queen-cells, some containing eggs. I cut them out, however, and left them over night, with the caged queen in the hive. I intended to keep her caged two days, but on looking in the next day she seemed so restless and anxious to get out that I thought I would let her out on a comb and see how the bees seemed to feel toward her, and if they acted hostile I could cage her again. I did so, and watched her nearly half an hour without seeing any hostile demonstration; so I concluded that it would be safe to leave her at liberty.

After two or three hours I opened the hive and found her balled; a little smoke dispersed the bees, and I found her uninjured. I then watched her crawl about for some time without seeing anything to convince me that they wanted to hurt her, but after awhile I lost sight of her for a moment, and then I saw a knot of bees on the board on which a corner of the frame was resting. This time the smoke did not have much effect, and I only got the bees separated in time to see the poor queen receive her death wound.

I then looked and found that more queen-cells had been started, which I cut out and then shut up the hive. They kept starting queen-cells, and I kept cutting them out until Aug. 2, when I put another caged queen into the hive. They still regularly started their cells, which I as regularly destroyed until Aug. 7, by which time I was rather tired of the game.

The great question was, where did the eggs come from that were in the queen-cells? If laid by a laying worker, why were not eggs laid in other cells of which there were thousands of empty ones by that time? But I could not find an egg except in these cells, and not in all of them. I had read of bees stealing eggs from other hives, so I supplied them with water and closed the entrance with wire netting, and kept them all shut in for two days. I then examined them, and lo and behold, there were the cells and eggs just as usual!

I was about at my wits' end, but I thought of one more thing that I would try. I had by this time added frames to the nucleus till there were four or five. I took out all the frames of the cranky colony's hive and carried them off to a little distance, and placed in the hive three frames containing no eggs or young larvæ, with the adhering bees from the nucleus. I then shook off the other bees on the ground, dividing the empty frames between the two hives, and leaving the bees to find their way back as they might. On looking the next day, though, it was the same old story—queen-cells, a part with eggs and a part with none.

The next morning I went out determined to form a new colony by taking frames from several hives, and break this one up by distributing its frames in their places, but first I discovered that the queen in the nucleus had begun to lay, when I thought my best plan would be to unite the two, and give the caged queen to the colony for which the nucleus queen was designed; this I did, and succeeded in uniting them safely by giving the nucleus one or two frames a day till all were in. Can any one tell what was the matter with those bees?

Normal, Ills.

Ventura, Calif., Convention.

The Ventura Bee-Keepers' Association met in Union Hall, at San Buenaventura, on Aug. 7, 1886. Mr. Wilkin was elected President and C. M. Drake Secretary.

Mr. Richardson made a report of a warehouse for holding the honey of the county, 40x100x9 feet, with concrete floor and iron covering, with a capacity of 500 tons of honey, saying such a building would cost about $850. Mr. Mercer said a brick one would cost double that amount.

Mr. Corey gave several good reasons why honey is low. Mr. Blanchard thought we should organize and work together; store it and borrow upon it instead of forcing sales early in the season.

The following address was read by S. C. Gridley, of Nordhoff:

DISPOSING OF THE HONEY CROP.

I offer these thoughts with the hope that they may lead to financial good to ourselves. I offer them as suggestions for the bee-men to think over—to alter or amend for the good of the cause—and if anything in this essay proves to be of any benefit, I shall feel that I have been of some help.

We must combine in some form to protect ourselves against the middleman—the speculator—and the many hands our honey passes through before it reaches the consumer. We must divert some of these profits to ourselves, or our business is ruined. The fruit-men have shown us the way and the benefits derived from union of interests. "In union there is strength." Why cannot we follow in their footsteps? Surely we can, and we must do so at once.

Now, I propose the following as suggestions: First, incorporate; then build a fire-proof warehouse large enough to hold the crop of the county, with an office and a large room besides, for purposes which I will mention further on. It is not necessary to build this warehouse where land is expensive. Find out where the railroad line will run, and build close to it on cheap land. The railroad will build a switch to it. Let the incorporation be called the "Ventura County Honey-Packing Association," or any other name that will be appropriate. Let the sole business be in honey and wax in its various forms. Let the bee-men store their honey and wax in this warehouse, and arrange so that money can be drawn from the association on the honey deposited in the warehouse. That will give every man a chance to help himself at once without waiting, and will release the honey market, form a selling pressure, and tend to equalize the price of honey. Further, I would propose to have a good, reliable man—one who is used to selling goods—go over the country with samples of this honey and sell it. Go to the best markets with it. Merchants buying from such an association would be assured of getting just what was represented, and from a reliable source.

Now, use the large room I spoke of before, to repack the honey as fast as the orders come in. When the salesman sells to a retailer, he wants it in a nice, attractive package—one that will strike the eye. Well, put it up so. Put up a dozen in a case, with handsome labels, the association's trade-mark, and with recipes for using honey in place of sugar for making cakes and preserving fruit, and in this way create other uses for honey, and so stimulate the demand. Also, put a handsome show-card, full size of case, in each and every case, to hang up in some conspicuous place in his store. Make it handsome enough so that he will think it an ornament and preserve it, instead of throwing it away. Let it be as handsome as the art of lithographing can make it. In this way Ventura honey will make a name for itself, and will be in demand, and in the course of time orders will come of themselves—will need no salesman. Comb honey should have the stamp of the association on each and every section. Take the wax as it comes in and render it and make it clean. Have appliances to bleach it, and thereby get a larger return for it. When our salesman strikes a brewer or tobacconist, he will want it in bulk. Well, put it up to suit him too, and put the association's brand on it. He will be suited with the lower grades of honey.

The cost of cans and cases, as we all know, is a very large item of total loss to the apiarist. Let each and every bee-man provide himself with enough barrels lined with tin or some other material to hold his crop. The first cost would be considerable, but then they would last for years. Let him put his honey in them and store them in the warehouse, and let all the grading and packing be done at the warehouse. It might be advisable for the association to own the barrels, and rent them to the bee-men at so much the season or ton. The association could pack the honey much cheaper than the individual, for they could buy in large quantities at a less cost; or they might have machinery for making cans, and manufacture for themselves, and save all the profit. I bought cans and cases in San Francisco this season at 65 cents each. Here they are 85 cents—a wide difference.

Now, a very important question comes up: What will all this cost? How much money will it take? It will require considerable capital to handle the honey crop of the county this way; but I think a finance committee appointed by this meeting might induce some capitalist to embark in the enterprise. I think we ought to be able to make a good showing for a fair rate of interest on the money—but not one per cent. per month. We should be able to get the money at from 6 to 8 per cent. per annum, and I think it could be done. The association would have to raise the money for building the warehouse and accessories among its members; but after that there will be no trouble in raising money on warehouse receipts. There are 600 tons of honey in this county. An assessment of one-quarter of one cent per pound would bring $3,000; one-half of one cent, $6,000, which would be ample to build the warehouse. The bee-men could pay their assessments on honey at the market price, let it be sold, and the proceeds devoted to building the warehouse, etc. Then let the stock be issued to each one to the amount of his assessment.

The advantages of such an arrangement, to my mind, would be numerous. One of the greatest would be that every bee-man, big or little, when he gathered his crop could raise money on it at once, and that alone would be a great boon to most of us. Another, we would get rid of middlemen and speculators; we would save all their profits to ourselves. That would largely increase the price of honey to us at once.

Now, as to the division of the proceeds of the business. Let a certain percentage be set aside for interest and the various expenses, and for a sinking fund. Let the sinking fund be liberal, so that the corporation can soon clear itself from debt, and in the course of a few years the surplus would be large enough to enable the association to furnish all the money for every purpose. After the season's business is finished, let a dividend be declared to every one depositing honey in the warehouse in proportion to the amount and kind of honey deposited. If this can be carried out I believe the honey-producers will receive a larger return for their crops than they have ever done.

I offer these thoughts as suggestions. My only wish is to help the good cause, and get 10 cents a pound for our honey, if we can.

A committee of five, consisting of Messrs. Wilkin, Barrows, Richardson, Blanchard, and Grimes was appointed to report at a future meeting, concerning a warehouse, storing and selling honey, organizing, incorporating, etc.

Adjourned to meet at Santa Paula, Calif. C. M. DRAKE, *Sec.*

For the American Bee Journal.

Using Plain Sheets of Wax.

CHAS. DADANT & SON.

In answer to Query, No. 283, on page 468, on the result of using plain sheets of wax in the brood-chamber, we said that bees build on those sheets very irregular comb, which may be drone-comb as well as worker-comb. On page 536 Mr. J. F. Hays writes:

"From the answer of Messrs. Dadant & Son one would suppose that honey-comb was always a clumsy, haphazard affair, until the genius of man enabled the bee to build its comb without mixing drone and worker cells together in an indiscriminate mass. They doubtless gave their honest *opinion*, but it is decidedly not my observation. I have examined the combs in a number of colonies that were hived on empty frames without any starters whatever, and I found no more drone cells than in colonies that were hived on full sheets of worker comb foundation. Now let Messrs. Dadant & Son explain *why* bees should be more disposed to build an irregular mass of drone and worker cells on plain sheets than where there are no starters at all."

Our answer to the query was not our "opinion," as Mr. Hays supposed, but the *result of our experience*. About 15 years ago we put a plain sheet of wax, filling a whole Quinby brood-frame, between two combs, in a very populous colony. The bees began immediately to build cells on it, but they started the work in 8 or 10 different places at the same time; some working at the top, some at the middle; some preparing worker-cells, some others drone-cells. When the sheet was about finished it had a great many irregular cells, which were necessary to join the different spaces, since these spaces were built independently from each other. The answers of several bee-keepers on the same query show that they have obtained as bad results as we did. Mr. Hays' better success was probably due to the narrowness of the sheet used.

As to bees changing worker combs in drone comb, as Mr. Hays has noticed in his hives, we think that his bees are very much different than ours, for we have never seen it done. If sometimes they build drone comb on worker foundation, it is the fault of the comb foundation, or of the bee-keeper, not of the bees. If the wax used is not altered by the manufacturer—if the sheet is prevented from stretching, either by its thickness or by 2 or 3 wires, all the cells will remain worker cells.

For about 20 years we have advised bee-keepers to replace all the drone combs in their hives with worker combs; we did it ourselves by buying the combs of dead colonies around us, and we have not yet seen a single worker comb replaced with drone comb. For 20 years we have had colonies which do not rear 100 drones yearly! Therefore, if Mr. Hays thinks that he obtained a result different from ours, he had better observe again, and with a little more care.

Hamilton, Ills.

For the American Bee Journal.

Does the Pollen Theory "Hibernate?"

R. L. TAYLOR.

When I had read Mr. Wm. F. Clarke's article on page 468, a wicked thought for a moment took possession of me, that he was in the predicament of a certain attorney, who, having been employed by the defendant to attend to the case, when the case came on for trial, found his brief consisted of this only: "No case—abuse the plaintiff's attorney." But on second thought I knew that Mr. C's character would never permit such a course, and that his skill and genius would always prevent its necessity.

I need not say how greatly I have admired his frantic efforts to make it appear that the pollen theory has received its "quietus," the more perhaps because it does not seem to be of the kind that "hibernates." Possibly calmer treatment on his part would have a greater tendency to make it sleep. But I admire his efforts chiefly because he makes his statements squarely and positively, without "ifs" or "buts," or "in-my-opinions." No one can fail to know where he wants to stand even though he may not always be found standing. He is, I believe, the father of the attempt to induce apicultural writers meekly to insert one of the above, or a similar qualifying word, with every statement, but when we consider his practice one is forcibly reminded of an incident found related in one of our Lord's parables, which runs thus: "And he said, 'Son, go work to-day in my vineyard'....and he answered and said, 'I go sir;' but went not." However, I like his practice better than his precept. He gives as hard knocks as he can in a capital spirit, and will be content, no doubt, to take hard knocks given in the same spirit.

One is a little surprised at first that Mr. C. has not, in order to make his position impregnable at every point, squarely attacked Prof. Cook's argument which seems to many to actually demonstrate the truth of the theory. If he would do so it would relieve many of us of most of our wintering terrors. His making a straw man out of a couple of detached phrases, taken out of their connection, pieced out with a like number from the writings of Mr. Heddon, and knocking that over, gives us hope, but no relief. And even hope wavers, for I fear he has made even the straw man too strong, for I am more than apprehensive that *it* has not yet toppled over.

Let me protest here against his over-generosity in giving Prof. Cook all the glory of having given this whole thing its "quietus." Even if it were well to dispose of the spoils before they are captured, I insist that they belong to Mr. C., and at least when he brings the relief let his be the glory; and we may, too, suppress our surprise at the course of his argument, for we may not hope to divine the plans of genius. No doubt many harder blows are in reserve. Indeed, I more than half believe that all his attacks hitherto have been purely feints.

In anticipation of the onsets yet to be made, let us look over the field to see as best we can how the contest now stands. Prof. Cook argues fairly that the consumption of pollen in any considerable quantities by bees in winter, when they are long confined, from the nature of the food and the habits of the bee, is apt to result in an over accumulation of fecal matter, which causes the disease known as diarrhea, the great foe to the safe wintering of bees. He further shows that facts learned from the examination in many cases of the contents of the intestines of bees affected with the disease, supports his reasoning, and that his many experiments in wintering bees, with and without bee-bread, prove it true. Many others of our most careful bee-keepers are satisfied that they also have proved the theory true in the same way—by actual tests in wintering. To meet this argument and to show that Prof. Cook gives the pollen theory its "quietus," Mr. Clarke uses the following argument, using for premises quotations from Prof. Cook and from Mr. Heddon, and I will put it briefly and in simple form that it may be the more readily comprehended:

Pollen is necessary for bees when they work; breeding is work, therefore pollen is necessary for bees in breeding. And then: Pollen is necessary for bees in breeding; bees breed in confinement in winter without disease, therefore the consumption of pollen by bees in confinement in winter does not cause disease.

The above, I believe a full and fair statement of our writer's argument, and it looks plausible on first sight, but the merest tyro upon a slight examination will see that it proves nothing. *General* conclusions are drawn from *particular* premises. We may see how quickly the argument breaks down by re-stating the first syllogism, making the major premise *general*, as Mr. Clarke assumes the conclusion to be thus: When any work is going on in the hive, pollen is necessary for all the bees of the colony in order to keep their tissues intact; breeding is work going on in the hive—and we have not the conclusion he gets, but, therefore, when breeding is going on in the hive, all the bees of the colony require pollen to keep their tissues intact.

It is at once evident from this that he *assumes* that all the bees, or the bees generally, of a colony work when breeding is going on, whereas it requires *proof*. The nurse-bees may be a very small proportion of the whole. In the cases of successful winter breeding claimed by Mr. Hall and Mr. Barber, the bulk of the bees seemed to be "hibernating" on the outside of the hives.

Again, to make the conclusion of any validity in the further argument, it must first be proved that the bees *actually use* pollen to keep the tissues intact. Do they do it in confinement when all the circumstances are favorable? Do they not under favorable conditions of temperature and food prefer to grow lean and die as of old age, rather than to risk bringing disease to their household by the consumption of pollen? This seems to be probable from the well known fact that in hives where there has been breeding during winter, much greater numbers of dead are found.

Does not the quotation which Mr. C. makes from Mr. Heddon with such strong expressions of approval, viz: "I am quite positive that there is something about breeding, whether in confinement or when the bees fly regularly, which is very depleting to them," tend to prove the same thing? Mr. Clarke makes "depleting" here synonymous with "waste of tissue," *i. e.*, that the bees grow lean. If that is the true meaning of it here, it indicates that the bees in nursing brood do not always use pollen to keep their own tissues intact, for if they did they would not become depleted in this sense; and who knows but that such is the devotion of the nurses to the young of the hive, that they forego the use of necessary food, and so sacrifice their lives, unless after a time they turn to some other kind of work? But has he not given the word in its connection here a forced meaning? I hardly think that Mr. Heddon had in mind the state of the tissue of the individual bees, but rather the state of the colony—that it is depleted by the continual perishing of the nurses. This brings us to the same result, viz: that the nurses fail to use the food necessary to restore their perishing tissues. In either view the attempt to use the above quotation in piecing out an argument against the pollen theory, seems like a slip. However we may look at it by all this first part of the argument, absolutely nothing is proved, and all the further argument, as it gets its support only from the validity of this, must fall with it.

But granting for the sake of argument that the true conclusion is as he assumes it to be as he progresses in the argument, and we have this: When breeding goes on in the hive all the bees of the colony require *and use* pollen to keep their tissues intact; bees breed in confinement in winter without disease, therefore the consumption of pollen by bees in confinement in winter does not cause disease. But after granting him his major premise, we find his minor premise subject to the same infirmity as was the major in the former syllogism, *i. e.*, while it expresses a particular limited and exceptional fact which we may admit, he assumes that it expresses a general universal fact, viz: bees breeding in confinement in winter *always* do so without disease, which is not admissible, indeed, which is palpably contrary to the facts in general, except possibly a few isolated ones which only serve to make the rule more noticeable and undoubted.

Lapeer, Mich.

[With this reply to Mr. Clarke, we much prefer to let this matter rest, while we devote our attention to something else.—Ed.]

For the American Bee Journal

Foul Brood—Prevention and Cure.

N. W. M'LAIN.

I submit to the readers of the American Bee Journal a prescription for the cure of foul brood, as well as one for its prevention:

Take of soft water, 3 pints; of dairy salt, one pint. Use an earthen vessel. Raise the temperature to 80°, Fahr.; do not exceed 90°. Stir till the salt is thoroughly dissolved. Now add one pint of warm soft water in which has been thoroughly dissolved four tablespoonfuls of bicarbonate of soda (use the crystal). Stir thoroughly. Add to this mixture sufficient sugar or honey to sweeten it, but not enough to perceptibly thicken it. Now add ¼ ounce of pure salicylic acid. Mix thoroughly. Let this mixture stand for two hours, when it becomes settled and clear.

Treatment.—Shake the bees from the combs, and extract as clean as possible. Now thoroughly atomize the combs, using the mixture and a large atomizer. Return the frames to the colony.

If there is no honey to be obtained from the fields, feed honey or syrup to which has been added 3 tablespoonfuls of the mixture to each quart of honey or syrup. Stir well. The honey just extracted may be used without injury to the bees, if the mixture is added; but no more should be furnished than is consumed. Atomize the colony two or three times more, simply setting the frames apart so as to direct the spray well over the combs and bees—not brushing off the bees; three or four days should intervene between the times of treatment. The last may be given on top without removing a frame.

As a preventive, apply on top of the frames, or in any way by which the bees may get it. Also burn old dry bones to an ash, and pulverize. Mix up 1 gallon to each 50 colonies in the apiary, of the above mixture, adding enough sugar or honey to make it very sweet (say two or three times as much honey or sugar as would be a proper quantity for use in the atomizer). Stir in a full half-pint of the powdered bone ash. Place this gallon of mixture in, say four shallow vessels—perhaps bread pan feeders with floats on top—and stand these four in different parts of the apiary. You will be surprised at the rapidity with which the depleted colonies will recuperate and grow strong again. If you fear that the exposure of sweets in the apiary will induce robbing, the mixture can safely be fed the customary way on top of the frames in the hive.

I would recommend that you give the entire apiary one application of the mixture prescribed *for cure*, as this treatment frequently prevents the presence of the disease where it was not before possible to detect it. The quantity prescribed for use by means of a large atomizer is sufficient to treat 150 colonies. Not reckoning the sugar or honey used, the cost will not be more than 15 cents. I have prescribed this treatment with entire satisfaction and uniform success for the past two years. I will mention the facts in two or three of the apiaries for which I have prescribed this treatment:

1. Number of colonies in the apiary, 46; number apparently diseased, 13; number actually diseased, 28; disease so far progressed that the stench was very offensive in the yard; bees crawling out of the hives to die, by tens of thousands; effect of treatment apparent in one day; a permanent cure in each case.

2. Number of colonies, 60; serious cases, 38; combs black and putrid; a few had already been burned; effect of treatment apparent at once; a permanent cure in each case.

3. Number of colonies, over 150; number of colonies diseased, 60; bees swarming out; stench from hives nauseating; combs black and rotten; brood putrid; whole apiary treated; disease immediately arrested; effect of treatment on affected colonies instantaneous, even on apparently hopeless cases; every colony cured; disease eradicated, leaving no trace behind. Colonies all soon became strong, healthy and prosperous. For the purpose of further experiment, the combs of healthy and diseased colonies were exchanged; combs from diseased colonies being given the healthy colonies, and the combs of healthy colonies placed in the diseased colonies. The treatment was applied to both alike. In every case the disease would immediately disappear, and in many cases the diseased colonies were soon more populous and prosperous than those which had had

no disease, and had been undisturbed. This treatment, which is simple, cheap, and easily and rapidly applied, seems to be efficacious in the most virulent forms of foul brood, and seemingly furnishes immunity from the dreaded scourge.

Aurora,♁ Ills.

For the American Bee Journal.

Spring Management of Bees.

W. H. STEWART.

In this locality we have cold weather about Nov. 20, and I put my bees into the cellar at that time. I carry them in after dark. My reasons for doing so are given on page 424 of the BEE JOURNAL for 1885. I have also given a description of my bee-cellar, but as it has become unreliable, I will tell in what respect, and also how I have it now prepared.

I at first made an excavation in the side of a dry sand-bank, then walled it up with oak logs. I placed also oak timbers over the top, and then put on 2 feet of straw, next 2 feet of sand, then 2 feet of straw, and finished with 2 feet more of sand. On the lower side I made the entrance. I walled up on the sides and covered it with plank, and banked up and covered 6 feet thick with sand. I hung one door even with the wall of the cellar, and another at the outer end of this entrance-room, thus making a dead-air space between the two doors. I put a 4-inch pipe through the covering, and left it open all winter for upward ventilation. By hanging a thermometer in this pipe with a cord reaching down to the centre of the cellar, I could draw it up at any time, and as I did so, I found that after the bees were in the temperature was generally 45° above zero.

This state of things continued for three years, and the fourth winter the mercury was never found above 40°. The reason of this change was that at first the two layers of straw made a kind of dead-air space between each layer of sand, and the under side of the roof never became cold; but the straw decayed, and allowed the sand to form a solid mass top to bottom; and as the roof was elevated like a mound, about 6 feet above the natural surface, the wind kept the snow off, and the roof froze through, and kept the cellar cold.

I have now built a large stack of wild hay on the cellar over the 4 feet of sand, and built out the entrance room so as to admit of the third door, which, I think, will hold the temperature again at 45°.

About March 20, or a little later, the weather in this locality becomes warm enough to make it safe to put the hives on the summer stands. As I examine them I generally find a little brood in 2 or 3 combs. In the fall I so manage them as to have the upper portion of the combs built out thick, and filled with winter stores; thus it is that what brood they now have is in the lower part of the combs; and although the upper portion has been emptied of most of the stores, yet the cells are too deep for breeding purposes, and also the lower portions of the combs (where the brood is found) are too far apart for breeding at this season of the year.

I then place a tent over the hive to prevent robbing, and have with me the honey-knife and the coffee-pot of hot water. I open the hive (smoke the bees a little) and then lift out the combs that contain the brood; carefully brush the bees down into the hive, and then trim the upper portion of the combs down to a ⅞-inch thickness, and on returning them to the hive, I leave only ⅜-inch bee-space between them. I then place a comb containing honey next to the brood. When thus prepared, the queen will occupy nearly the whole of the surface of these combs before passing over to others that are yet spread apart. This keeps the early brood in a compact shape until the weather gets warmer; and as I open the hive later, and find that the queen needs more room, I trim other combs, and move them closer together until the hive is thus snugged up and filled with brood. It is sometimes, when not too cold, a good plan to part the combs of brood, and hang an empty one between them; but if this is done indiscreetly, the brood thus separated and not well covered with bees, is apt to be chilled. It will do when the weather is quite warm.

I generally find some colonies short of stores, and others having more than they need, and to make all equal, I change combs over from hive to hive until all are about alike. In trimming the top edges of the combs, it is sometimes necessary to cut through some honey that has not yet been used by the bees; but if one is careful not to drop any outside of the hive, no robbing will be induced. I have a dish with a cover to hold the shavings of comb and honey, and I do not allow robber bees to get a taste of it.

This explains why the combs in the brood-chambers were too thin in the fall to contain sufficient winter stores; and it will be apparent to all that combs thus thin, and cells so shallow, would necessarily have to be filled nearly to the bottom-bar to hold sufficient stores for winter and spring. Again, bees require empty combs to cluster on in winter. Combs that are full of honey, and so near together that but few bees can cluster between them, are too cold. If it becomes necessary to feed in the spring, I prefer to fill the combs with honey or sugar syrup, and hang them in the hive next to the brood.

I sometimes find queenless colonies in the spring, and some of them have plenty of bees and stores, and seem to lack nothing but a queen. (I do not like the idea of holding combs in the open air a long time in trying to look up the queen. One can very quickly ascertain whether there are eggs in the combs, and during the breeding season no eggs means no queen.) In this climate the nights, and many of the days are so cold that it is almost impossible to get a queen from abroad without her becoming chilled. I have found that if I give these queenless colonies combs containing eggs, they will rear a queen in due time, but at this season there are no drones, and we cannot get them flying before about June 1, and thus this queen would be so old before being mated that she could not make a successful mating; and so I allow her to live about ten days and then destroy her, and two days afterward I give the colony another frame of eggs and brood, and they rear another queen which will be in time for drones, and the brood thus given will keep up the colony. I have several times thus reared the third queen before one would be mated, and then the colony would give a good surplus that season.

About June 1 some of the strongest colonies begin to show plenty of bees and brood. From these colonies I sometimes take frames of hatching brood, and exchange them with weaker colonies for empty combs. This very much assists the weaker ones to get ready for the coming honey-flow. It is best, however, to be a little careful how we thus reduce the strength of our best colonies; for, if the season is too far advanced for this work, we may thus keep all so weak that a goodly part of the early flow will pass before we have any colonies ready for the supers. It is better to get surplus from a part of the colonies than to lose it all.

In early spring, and sometimes in the fall, the strongest colonies will begin to rob out the weaker ones. I have tried many ways that have been recommended to stop this robbing, but I have tried nothing that proved effectual after the work was well under way, but to carry the one that is being robbed to the cellar, and let it remain there in the dark two days.

Sometimes when bees are being over-powered by robbers, they seem to get confused and disorganized like they do when they are alarmed by smoke, and in that condition they are able to make but a feeble resistance; but if they are placed in the dark room for a short time they again organize, repair damages, and are again ready to defend their home. It is well to keep the entrance of the hives smaller in the spring than is required later in the season, and I prefer to have all hives face the south-east; this gives them the morning sun, and keeps out the northwest winds that sometimes are very destructive to the young brood in this northern climate in the springtime.

Some think it best to keep chaff or some other non-conductor around the hive in the spring. I do not like it. Hives thus protected do not get warmed by the sun, and the temperature remains about the same day and night, and "there is no let up," and "long continued cold" "is a giant" in the spring. When the hive has only single walls, and a single board for a cover, the sun will often so raise the temperature in the hive that the bees can safely break the cluster and fix up matters to their advantage. I never shade a hive in the spring.

Orion,♀ Wis.

North American Bee-Keepers' Society.

FRANK L. DOUGHERTY.

The North American Bee-Keepers' Society will hold its 17th annual convention Oct. 12, 13 and 14, 1886, at Indianapolis, Ind. The meeting will be held in Pfofflin's Music Hall, 82 and 84 North Pennsylvania Street, one of the most pleasantly situated halls in the city, having good ventilation and plenty of light. The Society head-quarters will be at the Occidental Hotel, corner of Washington and Illinois Streets. The regular rates of this hotel are $3 per day; special rates for those in attendance at the convention, $1.50 per day.

The Northwestern Bee-Keepers' Society, the Indiana State Society, the Eastern Indiana, with various county and joint societies will meet in union with the North American, making it one of the most important meetings of bee-keepers ever held in the country.

Ever thing possible will be done to make the meeting pleasant and entertaining. An earnest, cordial invitation is extended to all.

The following is the programme for the three days:

FIRST DAY—TUESDAY.

Forenoon Session, 10 a.m.—Convention called to order. Address of welcome, by Gov. I. P. Gray; "Response" by the President, H. D. Cutting; "Welcome to the City," by Mayor Caleb S. Denny; "Thanks," Dr. C. C. Miller, President of the Northwestern Society. Calling the roll of members of last year. Payment of annual dues. Reception of new members and distribution of badges; reports of Secretary and Treasurer. Announcements.

Afternoon Session, 2 p.m., Special Business.—Annual address of the President; "Bee-Studies," Prof. A. J. Cook, Agricultural College, Mich.; "Apicultural Journalism," John Aspinwall, Barrytown, N. Y.; "Bee-Literature," Thomas G. Newman, Chicago, Ills.; "The Coming Bee—What encouragement have we to work for its advent?" R. L. Taylor, Lapeer, Mich. Subject for discussion, has "Apis Americana" been reached?

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions that may have accumulated during the day.

SECOND DAY—WEDNESDAY.

Morning Session, 9 a.m.—Announcements. Communication. Call of the Northwestern Society to elect officers. Election of officers of the Indiana State Society. Call to order. "Rendering Comb into Beeswax," C. P. Dadant, Hamilton, Ills.; "Foul Brood," A. J. King, New York. Selection of place for holding meeting in 1887. Election of officers.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. "Bee-Keeping and Apiculture," Prof. N. W. McLain, U. S. Apicultural Station, Aurora, Ills.; "Feeding Bees for Winter," Jas. McNeill, Hudson, N. Y.; "Wintering Bees," Dr. J. B. Mason, Wagon Works, Ohio; Subjects for discussion, "Is the use of Foundation Necessary in Modern Bee-Culture?" "Are Perforated Honey-Boards a Success?" Unassigned essays.

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions in question-box. Social communications.

THIRD DAY—THURSDAY.

Morning Session, 9 a.m.—Announcements. Miscellaneous business. Communications. "A Talk on Hives," James Heddon, Dowagiac, Mich.; "Reversible Hives and Frames," J. E. Pond, Jr., Foxboro, Mass.; "Drones and Drone Comb," W. Z. Hutchinson, Rogersville, Mich.; Reports of Vice-Presidents; "Progress of Bee-Keeping in Indiana," Jonas Scholl, Lyons Station, Ind.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. Explanation of various articles on exhibition.

Many good things yet to be added to the programme are not sufficiently developed to give.

Indianapolis, Ind.

Local Convention Directory.

1886. *Time and place of Meeting.*

Sept. 16.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburg, Ind.

Oct. 6, 7.—Kentucky State, at Frankfort, Ky.
Jno. T. Connley, Sec., Napoleon, Ky.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 16.—Sheboygan Co., at Sheboygan Falls, Wis.
Mrs. H. Hills, Sec., Sheboygan Falls, Wis.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bee-Keeping in Kentucky.—Jno. T. Connley, Napoleon,♂ Ky., on Sept. 6, 1886, writes:

The season has been rather an unprofitable one for bee-keeping throughout this State, yet all the apiaries so far as heard from are in good condition, and the apiarists are all cheerful and look forward for a good "honey year" soon. Bee-keeping as a business is gradually getting on a better footing through the educational influence of the bee-papers and bee-keepers' associations, of which our State society is one of the best.

Value of Alsike Clover.—S. J. Youngman, Cato,⊙ Mich., on Sept. 1, 1886, says:

I wish to say in defense of the Alsike clover, that notwithstanding there has been the greatest drouth known in Michigan in 25 years, the Alsike produced a large crop of hay, and yielded a large amount of fine honey. I now have a piece in full bloom, and the bees working on it finely, from which had been cut a large crop of hay in July. The Alsike is a fine plant for hay, and stock of all kinds relish it greatly. I am now mowing it and feeding it to stock confined to the stable. I also regard it as one of the finest honey-yielding plants known, as it yields a large quantity and of the finest quality.

Earthquakes and Bees.—Dr. J. P. H. Brown, Augusta,○→ Ga., on Sept. 7, 1886, writes:

For the past week old Mother Earth has had a violent attack of colic, and has been "quaking" in a manner not flattering to persons of weak nerves. From the papers all have learned of the destruction to the city of Charleston. Augusta fared much better, but still many buildings have been injured, and chimneys knocked down. At my place, four miles from the city, the first shocks were very heavy. The house rocked like a vessel at sea for a few seconds. But we sustained no damage except a few cracks in the plastering, and a few broken vases. Courage and valor in battle avail much, but such qualities are worthless in fighting earthquakes. This matter seems to be in the hands of a Higher Power. All the negroes, and very many of the whites, are very much demoralized. My bees took it very differently. In the morning, after the "quake," they went to work joyous and happy, gathering honey from sumac. What little philosophers these bees are!

Some of Bee-Bungler's Honey.—P. J. England, Fancy Prairie,⊙ Ills., writes:

Not long since I was in one of the leading grocery stores of Springfield, and saw some tin cans containing honey. They were ornamented with brilliant labels on which were high-sounding words. But the contents were almost *nauseating*. It is a shame for any man who claims to be a *scientific* bee-keeper, to put such *stuff* on the market.

Bees Still Working.—A. Wortman, Seafield,⊸ Ind., on Sept. 6, 1886, says:

My bees have been doing splendidly for the past two weeks, gathering nectar from buckwheat and smartweed, and other fall flowers. I had 6 swarms in August. I now have 61 colonies and 3 nuclei.

Curing Foul Brood with Coffee.—Dr. J. W. Vance, Madison,♀ Wis., on Sept. 2, 1886, gives his experience as follows:

I have just read Mr. Dennler's article on page 550, on "Coffee for Curing Foul Brood." I read last winter in a German agricultural paper the article quoted from the *Militarartzlichen Zeitschrift*, which gave the results of experiments made with coffee as an antiseptic. Last year I had the misfortune to have all of my colonies affected with foul brood. I discovered the disease late in the fall, and at that time, knowing only the destructive and starvation plans of cure, I destroyed all but two, intending if the two, which were the strongest and least affected, survived the winter, to treat them according to the Jones' starvation method. During the winter I read the article above alluded to, and determined to try it on one, and also hearing of Cheshire's phenol treatment, I thought I would experiment with it on the other and see which was the better method of cure. Both colonies wintered well in the cellar, and when I took them out in the spring I examined them, and found foul brood in each. I used powdered browned coffee, dusting over the combs and bees, three times, about a week apart. The last of July I examined them, and found them in a flourishing condition, and not a trace of foul brood in the hive. I regard the coffee as a successful remedy for the disease, easily applied, and not in the least injurious to bees or honey. I hope others also will test it. The coffee must be finely powdered in order to render it the most effective.

Egg-Bound Queen.—F. A. Gemmill, Stratford, Ont., on Sept. 6, 1886, writes:

I send a queen-daughter that is 2 months old. She is certainly a fertilized queen, but lays scarcely any—only an egg now and then. She is, I think, egg-bound. She is one of my own rearing. I have on several occasions found an egg attached to her. Will Prof. Cook kindly give his opinion of the case in the BEE JOURNAL.

[Such cases as are mentioned by Mr. Gemmill are not very rare. Sometimes the queens recover and become excellent; oftener they remain forever worthless. That such cases should occur is not strange. We find partially or wholly barren animals among all classes, and so such queens are not exceptional in their kingdom any more than in their species. This queen is a fine looking one, and I shall keep her till spring to see if she recovers. In most cases the best way is to kill such queens at once.—A. J. COOK.]

How I Sell my Honey.—J. E. Cady, Medford,♀ Minn., on Sept. 6, 1886, writes:

The following is an outline of my manner of disposing of my honey: I advertise in each of the county papers; then I use a business card, also a guarantee card signed by seven of our principal citizens. I often meet people who wish my name and address; others say, "Is this made honey, or is it made by bees?" I sometimes have had to swear in my honey, when an explanation of the method of taking extracted honey is necessary. This takes time, and time means money when away from home on expense. One of my business cards that I gave to a wagon maker, and which he tacked up in his shop, has sold 3 barrels of honey already to one man, and he says he shall need several barrels more. I have already sold over 4,000 pounds, and have nearly 6,000 pounds on hand; and the supers to come off of 100 colonies, some of which are full, not having been extracted since July 10. Then there are sections on 42 colonies, with a few more or less filled. I took 20 nicely-filled 1-pound sections out of 56 from one colony, two or three days ago. It has been very hot and dry here this season, and certainly it must have shortened the honey crop. We are having a nice shower just now.

Partridge-Pea, etc.—Otto Bussanmas, Bevington,♀ Iowa, on Sept. 2, 1886, writes:

I send a plant with its flowers, which please examine and state its name and value. In this part of Iowa the season has been very dry, and yet there has been a fair yield of white clover honey. I harvested 3,400 pounds of white clover honey in 1-pound sections from 31 colonies, spring count. I increased them to 65 colonies. I could not do without the BEE JOURNAL for double its cost.

[The plant is partridge-pea (*Cassia chamæcrista*), and furnishes nectar in abundance. The flowers are very attractive to honey-loving insects, and are visited by such in great numbers.—ED.]

Convention Notices.

☞ The annual meeting of the Kentucky State Bee-Keepers' Association will be held at Frankfort, Ky., on Oct. 6 and 7, 1886. All interested in bee-culture are earnestly requested to attend and help to make this meeting a pleasant and profitable one. The State Centennial will be celebrated at Frankfort, on Oct. 7, and excursion rates can be obtained on all railroads. A large attendance of bee-keepers is solicited. JNO. T. CONNLEY, *Sec.*

☞ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.
E. T. ABBOTT, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, *Sec.*

☞ The Sheboygan County Bee-Keepers' Association will meet at Chandler's Hall, at Sheboygan Falls, Wis., on Saturday, Oct. 16, 1886, at 10 a.m.
MRS. H. HILLS, *Sec.*

☞ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. BALDWIN, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Eastern Indiana Bee-Keepers' Association will meet at Richmond, Ind., on Sept. 16, 1886. M. G. REYNOLDS, *Sec.*

* * *

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 7 a. m., Sept. 13, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—It continues to arrive very freely. The demand is light and sales are made chiefly at 12@13c. Extracted is also quiet with prices unchanged, 6@7c.

BEESWAX.—It is easier, and 23c. is about all will bring.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for the new crop of comb honey is just opening. We note an improvement in sales and prices. Most of the comb that has arrived is badly colored, which makes it second grade, which we suppose is due to a poor season and long finishing. We quote 1886 crop as follows; Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c; 2-pound sections, 11@13c. Extracted, 6@8c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Best white in one-pound sections is bringing 14 cts.

BEESWAX.—Firm at 23c. for fair quality.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—The market is very quiet. Demand from manufacturers is slow, and there is only a fair trade in new comb honey and extracted in square glass jars. Extracted honey brings 3 1-2@7c.; comb honey, 12 to 14c. for good to choice, in the jobbing way. Prices are low for all produce and no speculative feeling is noticed anywhere. Unless better prices are realized for other produce, prices of honey are not likely to advance.

BEESWAX.—It is in good demand and arrivals are fair. We pay 20c. for good yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The demand for honey is not very lively at present, but prices are steady. Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is active and sales of the comb are large. Extracted is firm with no stock in the city. We quote: One-pound sections of white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 8@10c.; 2-lb. Calif. white sage, 10@11c.; dark 2-lbs., 8@9c. Extracted white clover, 7@8c.; dark, 4½@5½c.; Calif. white sage, 5½@6c.; dark, 4½@5c.

BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is about the same as when last reported—may be quoted a little lower to sell. Choice comb in 1-lb. sections, 12@13; 2-lbs., 11@12½ cents; dark not wanted. Extracted, white, in kegs, 6@6½c.; same in tin cans, 6 1-2@7c.; dark in barrels and half-barrels, 5@5 1-2 cts.

BEESWAX.—No demand.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The demand for honey remains very good for fine qualities, and they are readily taken for home consumption, and shipments to Europe and the East at 4@5¼c. job here. Most of the honey is held at 4½c. and more, and it seems that sooner or later such prices will be paid, as offerings are rather small. Comb honey is not sought after so far, but with the colder weather more demand will come in, and as supplies are rather small, we anticipate full prices. We now quote 7@10c., as to quality, wholesale.

BEESWAX.—It is dull, but buyers have to pay 22@23c. for choice lots.

SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Prices are so low that honey-producers are holding back their product; still the market is well supplied. We quote: Comb, extra white, 8½@10c.; off grades, 6½@7½c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.; dark, 3c.

BEESWAX.—22½@23c.

O. B. SMITH & CO., 423 Front Street.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for **9** cts. per crate. Glass 1¼c. per light, extra.

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at **$6.00** each.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
The 6 above-named papers	5 50	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

☞ **Sweet Clover,** or *Melilotus Alba,* is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs,	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

Italian Queens.—We have a few untested queens which we can send by return mail. Three for $2.75; six for $5.00; twelve for $9.00. For Tested, double the prices.

"Cash in Advance" is the rule, but no longer than six months of grace can be allowed on the small sum of one dollar. Subscriptions may commence at any time, and discontinuances may be ordered at any time when arrearages are paid up.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers before Jan. 1, 1887.

When Marketing Extracted Honey, it is a sad *blunder* to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

"**Don't Stop**"—that is what many write to us about their papers, when their time is nearly out. One subscriber says : "It is not convenient for me to send the money now to renew my subscription. It runs out with this month ; *but don't stop sending it.* I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

Advertisements.

A **BARGAIN**—25 to 30 Colonies of Italian and Hybrid Bees, all in good condition, for sale at less than half their value. Colonies in good hives on 8 to 10 frames. For full information address, C. O. Dusenberry, Guyandotte, W. Va.
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EUROPEAN Agency wanted for American Bee-Goods.—Herbert P. Fatt, 23 Cornhill,
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Bee-Hive and Section Factory

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GREAT REDUCTION !

UNTIL January 1st, we will sell at a discount. Write for Reduced Prices.

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BEES and HONEY for SALE.

I **OFFER** to sell Good Full Colonies of Hybrid Bees at $4.00 per Colony : 50 or more at $3.50 per Colony. **HONEY** for Sale at 12½ cts. Call on or address,

R. S. BECKTELL,
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SENT one year, and a **Tested Italian Queen**, to each subscriber—all for $1.50. Sample copies free. Address,
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AND
APIARIAN SUPPLIES.

First-Class Goods at Low Prices.

A FINE LOT OF ITALIAN BEES
For Sale Cheap.

Send Postal Card for Illustrated Circular and Price-List.

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We make the finest Honey-Sections in the World and make no exceptions. G. M. Doolittle says : "The last sections are just complete." James Heddon—"They excel *everything* in the line of perfect workmanship." Prof. N. W. McLain—"The sections excel anything I have seen heretofore." J. B. Mason—"Have received samples from all manufacturers who advertise in the bee-papers. I must say this is by far the nicest section I have ever seen." Jno. L. Janeway—"They seem perfection itself so far as human workmanship can go." Sample for 2-cent stamp. Price-List of Sections, Hives, Syrio-Albino Queens and Bees, and other Apiarian Supplies, free.

Address, **DR. G. L. TINKER.**
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BEE-KEEPERS, before ordering your

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Send for our large Illustrated Catalogue, sent free to any address.
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ATTENTION, BEE-KEEPERS ! !

NOW is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates : 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed and Queens sent by return mail. Address, **Wm. W. CARY,**
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Golden Italians.

WARRANTED Queens 75 cts. each ; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,

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THE HORSE,

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A TREATISE giving an index of diseases, and the symptoms ; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison ; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse ; a valuable collection of recipes, and much valuable information.

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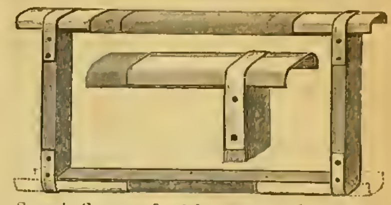
Metal Reversible Frame Corners.

ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.



Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. **F. M. JOHNSON,**
WASHINGTON DEPOT, Litchfield Co., CONN.
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Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
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FREE! New Book of Fancy Works with **100** Illustrations, **150** New Stitches, **10** Special Offers. **200** Picture Bulletin 48-col. story-paper, all for **4c** postage
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33A13t

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees, Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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1. **The Widow Bedott Papers.** This is the book over which your grandmothers laughed till they cried, and it is just as funny to-day as it ever was.
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43. **Building Plans for Practical, Low-cost Houses,** a full description and plans of Eight modern houses, ranging in price from $500 to $4500.

Immediately upon receipt of subscription price, the ten books you select will be sent you, postpaid, and also special terms by which you can make from five to ten dollars per week with little effort, if you choose to do so. The entire list of -43- books and City and Country for one year will be sent—all postpaid—on receipt of only one dollar. Accept this generous offer at once. Address the publishers, **WILL C. TURNER & CO., Columbus, Ohio.**

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OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, $1.00, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

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☞ The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for $1.75.

Vandervort Foundation Mill.

6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
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BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1A1y Agricultural College, Mich.

HOW to WINTER BEES.

THE October number of the **American Apiculturist** will contain essays on **"Wintering Bees,"** from the pens of **James Heddon, G. M. Doolittle, A. E. Manum, Prof. Cook, Dr. Tinker, J. E. Pond, Ira Barber, J. H. Martin,** and other equally prominent apiarists. Every bee-keeper should secure a copy. For ten cents in stamps this number will be mailed to any address on September 25. No specimen copies of this number will be sent out.

Regular subscription price $1.00 per year. Single copies 10 cts. each. Copies of back numbers will be sent free. Address,

AMERICAN APICULTURIST,
33A6t WENHAM, MASS.

HUMPHREYS' HOMEOPATHIC SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

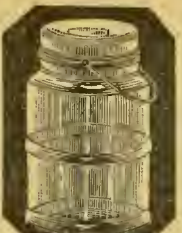
and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.

Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,

DR. C. C. MILLER,
20Atf MARENGO, ILLS.

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	$1.60
" 2 pounds " "	2.00
" 3 " " "	2.50

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FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Entrance Feeders, Top and Bottom Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

10A1y **J. M. SHUCK, Des Moines, Iowa.**

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

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CHAS. F. MUTH & SON,
Freeman & Central Ave., - CINCINNATI, O.

P.S.—Send 10c. for Practical Hints to Bee-Keepers

RIBBON BADGES.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

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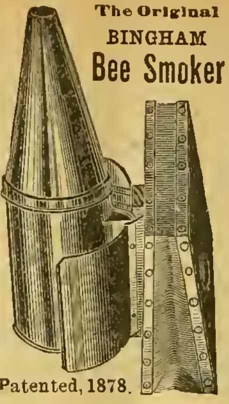
The Original BINGHAM Bee Smoker



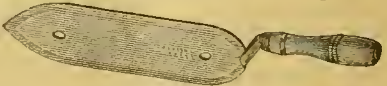
Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Snokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

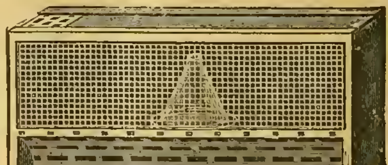
Prices, by mail, post-paid.

Doctor smoker (wide shield)...	3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)....	2½ " ..	1 50
Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker	2 " ..	1 00
Little Wonder smoker.........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch..............................		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
15Atf **ABRONIA, MICH.**

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address.

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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Sept. 22, 1886. No. 38.

Mr. W. Z. Hutchinson has taken a car load of bees, honey, and implements to the Michigan State Fair. That speaks volumes for his enterprise, zeal, and enthusiasm, and puts to shame those who ought to have exhibited at the Illinois State Fair—but failed at the critical moment.

◆

Mr. F. M. Johnson sends us a dollar for a Weekly that is "always on time," and "one that all bee-keepers should read, and then take heed—especially beginners." He gives no name to the paper, but, of course, we send him the AMERICAN BEE JOURNAL, knowing that it "fills the bill of particulars." He certainly is also on time, for his dollar pays for it until Jan. 1, 1888.

◆

Round Trip Tickets to the Convention.—As Manager of the National Bee-Keepers' Union, we have made arrangements with the Indianapolis lines of railroad for round trip tickets from Chicago to Indianapolis and return to Chicago, good from Monday to Saturday, Oct. 11 to 16, 1886, for $7.30. The fare one way is $5,50, and this is one fare and one-third. To obtain these tickets, it will be necessary to get a certificate signed by Thomas G. Newman, stating that the bearer is *entitled* to the reduced fare. Now, do not wait until you come to Chicago to get this certificate, for we may have gone before you come. Send for the certificate at once; and it will be sent by return mail.

◆

To Indianapolis there are three routes from Chicago — the Kankakee, the Pan Handle, and the Chicago & Eastern Illinois. On all of these the reduced rates for a round trip for $7.30 can be had upon the presentation of a certificate signed by Thomas G. Newman. We wish it to be distinctly understood that we have not been able to secure rates for any other points, only a round trip from Chicago to Indianapolis and return to Chicago. Several have written to us to get them reduced rates on other routes, and from other points—and we should be glad to do so, but have not been able to do it. We make this announcement to save correspondence on the subject. The tickets are good from Monday to Saturday, Oct. 11 to 16, 1886.

Bee-Keepers at the Zoo.—A Philadelphia paper gives the following as a report of the meeting of the bee-keepers at the Zoological Gardens at Philadelphia, Pa.:

The members of the Philadelphia Bee-Keepers' Association held their third annual convention and picnic at the Zoological Garden. President Dr. Henry Townsend, of 1514 Vine street, presided, and John Shallcross acted as Secretary. Among the well-known members present were: H. N. Twining, Joseph M. Neaglei, Prof. Brien, Arthur Todd, J. H. Lutgers, Thomas Davidson, and Miss Anna M. Crew, of Moorestown, N. J. English charts of all varieties of bees and their wonderful workings were hanging over all the walls of the building, while tables loaded with variegated species of fruits stood in the centre, a present from Mr. Neaglei

A large number of ladies and misses had everything prepared in the way of eatables, and hives of bees were placed promiscuously around the rooms. Dr. Townsend, at the opening of the session, said that although they had a choice between bees and elephants, he preferred to learn more about the bees. He read several papers on bees and consumers of honey, and regarding the prospects this year for honey, said:

"This has not been what could be called a first-class season, by reason of the dryness in the early part of the year, and the wet weather during white clover bloom time. Reports from nearly all parts of the United States indicate a general falling off in the quantity. In the vicinity of Philadelphia the crop was not only small, but not of very good quality, and not much has been done in the bee-line."

Arthur Todd, owner of the bees on exhibition at the "Zoo," furnished the gathering with a new and fine quality of honey ice-cream. Nearly all the afternoon was devoted to a discussion of bees. Head-keeper P. J. Byrne entertained the assemblage with several well-rendered solos. Thanks were tendered to Mr. Neaglei and Superintendent Arthur Irwin Brown of the "Zoo." Mr. Todd and other members of the association expect to exhibit bees at the State Fair.

With honey ice-cream and instrumental and vocal music, as well as excellent speeches, that convention ought to be a success.

◆

How to Put on a Postage Stamp.—We get many letters with the stamps entirely gone. The persons putting the stamps on the letters had licked all the mucilage off, and hence the stamps would not remain when they were put on the letters to start them. In rubbing together in the mail sacks they loosen and are lost. A correspondent in the Boston *Traveller* tells how to put on the stamps in the right way. He says:

A man can always learn something if he will only look about him. I was at the Post Office Department the other day and I noticed an employee busy affixing stamps to envelopes. Every time he moistened the right hand corner of the envelope and then placed the stamp upon it. I asked him if there was any advantage in wetting the envelope instead of the stamp, and he said: "You notice that I moisten the envelope first; well, I do that because it is the right way. There is a right and a wrong to everything, and consequently there is a right and wrong way to put on postage stamps. It is impossible to moisten a stamp with the tongue unless a small proportion of the gum adheres to it. Now this gum is by no means injurious, but then the Department does not advertise it as a health food; so the only way left is the right way, and that is to moisten the envelope first." After listening to this brief statement I felt as though I had emerged from the deep shade of ignorance to the glorious sunlight of knowledge.

◆

We Regret to learn that the wife of Mr. T. M. Cobb, of Grand Rapids, Mich., died on the 1st inst. The BEE JOURNAL condoles with Bro. Cobb in his bereavement.

A Laughable Item was in the London *Daily News* of Aug. 23, 1886. It is in a report of a law court, where a man asked for redress from trespassing bees. Here is the item:

CURIOUS APPLICATION.—In the course of the afternoon a man came before Mr. Chance and stated that he was in the employ of Mr. Jousiffe, wine merchant and cordial manufacturer, of South-Place, Kennington. For some days applicant was almost unable to attend to his work, owing to swarms of bees coming to the place, and he wanted to know what he could do to prevent it.—Mr. Chance: Where do the bees come from?—Applicant: From a place not far off where hives are kept.—Mr. Chance: Why do they come to where you are?—Sergeant Underwood: The bees no doubt, your worship, are attracted by the cordials and spirits.—Mr. Chance: I suppose they prefer this kind of thing to flowers. (Laughter.)—Applicant: I don't know, but I do know I am often stung and unable to get any rest from the pain. I could not get on with my work to-day owing to the bees.—Mr. Chance: I am afraid I cannot assist you. The bees are not included in the list of animals to be muzzled or kept under control. (Laughter.) They can scarcely be described as ferocious. (Renewed laughter.)—Applicant: But they sting very sharply.—Mr. Chance: I am sorry for it, but I do not see how I can help you. There have been no regulations at present to keep bees under control. Perhaps you might trap them or kill them.—Applicant: I have killed numbers, but more seem to come.—Mr. Chance: Perhaps you could protect yourself by putting on a wire mask, and wearing gloves.—Applicant: I don't know what to do. I have had to go to a doctor in consequence of the stings.—The applicant thanked his worship and withdrew.

Would'nt a man have a fly-time of it when trying to muzzle a few irascible bees! How lively they would make it for the muzzler! How numerous they would seem to him! and what an "object" they would make him appear in a few minutes! Justice Chance could find no law for muzzling them, and if he could, he would'nt try it the second time.

◆

Honey in Ventura Co., Calif.—A correspondent in the *Ventura Free Press* gives his opinion as follows on this subject:

As there have been conflicting reports published in reference to the yield of honey in Ventura county this season, I have obtained personal reports from thirty of the leading bee-keepers. These reports give the number of hives of bees on hand before swarming, also the amount of honey each bee-keeper produced; most all extracted honey. The average yield per hive was 150 pounds. I then obtained from the county assessor the number of hives assessed before swarming, which was 7871. Supposing there were 129 hives not given in, it would make in round numbers 8,000 hives, which, averaging 150 pounds each, would give to the country 1,200,000 pounds, or 600 tons of honey. The quality of honey in this county was never better than the present crop. Near the coast the quality is not so good, and the amount only half as much as that produced twenty miles or more back from the ocean, where it was warmer and less foggy.

◆

Present Indications point to a large and enthusiastic meeting at Indianapolis. There have been several additions to the programme, and more still will be made, in the future.

◆

No More Back Numbers can be supplied to new subscribers. Our stock is all exhausted. We give this notice because many are asking for back numbers from last January, and all will please take due notice.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Disposing of Surplus of Bees.

Query, No. 307.—It is necessary for us to reduce the number of our colonies one-half. They have swarmed but once, and are consequently all very strong. Will it be any advantage to double up the bees of 2 colonies in one hive instead of killing half, provided we can do it without their fighting?—H. & S.

I think it would be best to unite at least the *young* bees.—C. C. MILLER.

Kill half the colonies if you cannot sell them. Do not unite very strong colonies.—W. Z. HUTCHINSON.

You do not say why you want to double them up. I should say let them alone.—H. D. CUTTING.

No. There is no advantage in doubling strong colonies.—G. M. DOOLITTLE.

Do not kill, but double up. Do this late in the evening and they will not fight. If any choice of queens, destroy the poorest and cage the others to be sure of their safety.—J. P. H. BROWN.

If your hives are without bottoms, for wintering out-doors, unite in the fall by setting one colony on the other with honey cloth or board between, with small openings, and then remove and let them altogether after two or three days, and leave them in the double hives all winter. If wintered inside, simply set one colony on another as you put them out in the spring. There are some decided advantages in this method. — H. R. BOARDMAN.

If my colonies were of average size, I would never unite other bees with them, no matter what had to be done with the surplus bees. If it becomes necessary to do so, it is as proper to kill bees as it is to kill any domestic animal for the benefit of man.—G. W. DEMAREE.

What do you wish to kill any bees for? If all are strong, why double up? Leave them as they are, as possibly a severe winter may follow and kill off as many colonies as is desired or desirable. I can see no advantage so far as safe wintering is concerned, in doubling strong colonies. It can be done, however, without any perceptible loss from fighting.—J. E. POND, JR.

My experience teaches me that it would not. Such, however, may not always be the case in all localities and in all seasons, though I think it is a rule.—JAMES HEDDON.

It is better to double up colonies than to kill a part where it is necessary to reduce the number. As very large colonies do not winter so well as average sized ones, the doubling up should be done as soon as the season for surplus is over, or not later than Sept. 1. Doubling up is easily done by making one of the colonies to be united, queenless for nine days. Then cut out queen-cells and unite by using a little pepermint water.—G. L. TINKER.

Age of Queens.

Query, No. 308.—1. Will an Italian queen live longer than a black one? 2. How long does a queen live and keep her colony well furnished with eggs?—C. K. S.

1. No, we think not. 2. Three or four years.—DADANT & SON.

1. No. 2. Usually about 3 years.—G. L. TINKER.

1. I think not. 2. From 2 to 4 years.—H. D. CUTTING.

1. I presume not. 2. I have had queens live and remain excellent for five years. This is rare, however.—A. J. COOK.

1. I think there is little difference as to length of life of the queens of the two races, if both have the same treatment. 2. From 3 to 5 years, with me.—G. M. DOOLITTLE.

1. Probably not. 2. It varies very much; may be 4 years, may be not a year. Some think it pays to supersede all queens over 2 years old.—C. C. MILLER.

1. I do not know that she will. 2. The average life of a queen is 3 years of good service. First and second years the most prolific; third year on the decline.—J. P. H. BROWN.

2. If she is not "horse whipped" by spreading the brood, or exhausts herself by keeping a large brood-nest filled with brood, she may last four years.—W. Z. HUTCHINSON.

1. I know not. There is no reason why she should, other things being equal. 2. Ordinarily a queen will prove prolific for 2½ to 3 years. I had, last season, a queen 5 years old that was as prolific as any I ever saw. About 3 seasons, however, is the average with myself.—J. E. POND, JR.

1. I have not noticed any difference in the longevity of the queens, but Italian workers are longer lived than Germans. 2. Good ones live and keep up to the laying standard 3 to 4 years, and when they fail they fail all at once, and are superseded.—JAMES HEDDON.

1. I do not think the matter has ever been tested on a scale of sufficient magnitude to decide it with any certainty. So far as I am able to judge there is little if any difference in the longevity of the two races. 2. It depends upon the development of the queen. In other words, it depends upon her constitutional strength as to how long she will be useful. She ought ordinarily to do two years' good service. In exceptional cases she may do good work for 3 or 4 years.—G. W. DEMAREE.

Building Combs on Wired Frames.

Query, No. 309.—When only a strip of foundation 4 inches wide is used on a wired Langstroth frame, will the bees build the rest of the comb so that the wires are in the middle of the comb?—H. M.

That we have never tried, nor would we like to try it.—DADANT & SON.

I do not know, but I think not always.—C. C. MILLER.

If the wires are drawn taut, I think they will.—W. Z. HUTCHINSON.

They will build it near enough for all practical purposes.—H. D. CUTTING.

I should not use wire when using only a strip of foundation.—G. M. DOOLITTLE.

Not always. I prefer my frames to have tri-angular comb guides, and the foundation securely fastened to this guide; then I have no use for wires, which are at best a nuisance to the bees.—J. P. H. BROWN.

I always use full sheets with wire. I should suppose the wire would trouble some with only starters.—A. J. COOK.

The experiment has not worked well with me. I avoid wiring frames in all cases as much as possible. I much prefer combs well built in the frames without wire.—G. W. DEMAREE.

No; but why use wires in brood-frames? They are a needless and useless expense, besides being a great annoyance to the bees.—G. L. TINKER.

My experience is more limited than I meant that it should be at this time, but in the few cases tried, the bees have followed the wires perfectly every time.—JAMES HEDDON.

They do with me. I have as an experiment given a starter only ½-inch wide on wired frames, and found the comb was built directly on the wires. The frames, however, should be wired plumb centre, and hung exactly plumb in the hive.—J. E. POND, JR.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○+ east; +○ west; and this ♂ northeast; ⟜ northwest: ⊸ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Markings of Hybrid Bees.

G. M. DOOLITTLE.

In answer to Query, No. 297, I find that five out of the ten answering that query, say that hybrid colonies will have individual bees in them, which will show one and two yellow bands; while two others speak of two yellow bands only on such individual specimens. Now in all candor I wish to ask those seven persons if either of them ever saw an individual bee that had any yellow on either one of the first three horny scales or segments of the abdomen, beginning at the thorax, which did not have yellow on all three of them. If so, they have seen something which I never saw.

To be sure, I have seen bees which appeared to have but one or two yellow bands, from a casual glance, but close inspection always showed that if there was any yellow on the bee, that bee had yellow on all three of these first bands. The best of Italians appear at times to have only two bands, while such bees spoken of by Mr. Pond, which show four yellow bands, have times of showing but the three bands. This is wholly owing to the conditions of their surroundings causing them to appear thus, while the same bees under other circumstances appear very differently. The only way to tell perfectly just how a bee is marked, is to cause it to become filled with honey and then place it upon a window, when all the markings on the segments of the abdomen will show forth clearly. Will not these persons take some of their one and two banded bees and examine them as here given, and then tell us what they find?

Mr. G. W. Demaree once wrote that the meanest hybrids he could find, showed (when examined as above) yellow in splatches, etc., etc., on all three of the bands, if the yellow was shown on any, or words to that effect, which set me to looking into the matter more closely than I had before, when I soon found that he was correct. Why we talk of one and two-banded bees is because we do not stop to scrutinize closely enough regarding such bees as appear to have but one and two yellow bands.

In June and July, when brood-rearing is going on rapidly so that all bees over three days old are filled with chyme, or with honey for wax secretion, and the field bees are coming in loaded with honey, a colony of bees show off to their best advantage, as all except those under three days old look much the same as the filled bee does upon the window. At such a time almost any one would call a ¾-blood Italian colony good enough, and speak of it as containing *all* three-banded bees, as did Mr. Heddon of his hybrid colony in answering the query mentioned above.

Now wait until October or November, when the bees are getting ready for their winter's nap, and look at the same colony and they will be pronounced one and two banded bees by a person who is not a close observer. The reason for this is that the segments of the bee's abdomen are made so that one shuts over the other, telescope fashion, and when not in active employment the abdomen is so contracted or drawn up by one ring sliding into the other that all except the widest yellow band is covered up, so that the bee looks as if it possessed but one yellow band.

To show more perfectly what I mean, we will take one of Mr. Pond's four-banded bees, and a close examination will show the first horny segment next to the thorax to be composed of yellow and black, the yellow largely predominating. The next segment is the one having the most yellow on, and is the one *yellow band* which is always seen at all times, if any yellow is observed upon the bee. On good specimens the black on this segment is very narrow, often being hardly discernible, only as a mere line around the upper part of the abdomen. The next segment is (except on excellent specimens) about one-half yellow and one-half black; while the fourth segment will appear about as the second, only that the black takes the place of the yellow, so that only a small line of yellow appears on the front of the segment. In extra specimens I have seen this fourth segment have as much yellow upon it as is usually upon the third, while the fifth segment showed the yellow line around it. This is the way one of Mr. Pond's bees will look when shown at its best. Now let another bee sting it and in less than one minute the segments will so slide into one another, as the bee contracts in death from being stung, that all would pronounce the bee a two-banded bee, while if it showed but the three yellow bands while at its best it would so contract that but one yellow band would show enough to attract attention.

Bees, when first hatched, or when they go into their quiescent state preparatory for their winter's nap, appear very much the same as does a bee which has been stung to death, so that a good colony of Italians appear almost like hybrids when looked at late in the fall.

My way of examining a colony of bees is to carefully look the bees over till the poorest bee possible is found. This bee is caught and killed. I now take the head of it between the thumb and forefinger of my left hand, when the point of the little blade of my jack-knife is inserted just under the horny scale of the fifth segment of the abdomen. I then put my thumb-nail down on this segment and draw out the abdomen, carrying it over and around the finger holding the bee's head. If when thus tested the bee shows three clear, well-cut yellow bands, the colony is pronounced good enough for any use I may wish to put it to. If, on the contrary, the yellow is in splatches, or mingled with the black, or spots of black appear in the yellow, the colony can hardly be called as fine a thoroughbred as can be obtained.

Borodino, ⊙ N. Y.

For the American Bee Journal.

The Iowa State Fair.

EUGENE SECOR.

The honey and apiarian supply exhibit at the State Fair was a very creditable show. Every one who took part in it has reason to feel proud of the display. It was by far the best I have ever seen in the State. The exhibit at the New Orleans Exposition did not compare with it. The great bulk of it was comb honey. The display of extracted honey was not very large, but was put up in very attractive and tasty packages. Glass pails, and the Muth square bottles were the principal ones used.

The comb honey was shown mostly in pound packages, either in glassed shipping cases or tastily arranged on graduated shelves. Nearly all the modern hives were on exhibition. Not only the Shuck Invertible and the Hill Telescope hive, but a sort of cottage hive which looked something like a smoke house with lean-tos on two sides. Mr. Poppleton and myself stopped to examine it and to listen to the laudations of the person in charge. It was arranged for side and top storing, and had as many apartments as a Saratoga trunk. Its chief value, however, according to our informant, seemed to be that its capacity was equal to two common hives, and therefore it would yield twice as much honey. "You see," said the person in charge, "the way we manage is this: The first season we do not attempt to get any honey, but let it fill up with bees, and the next season we have a colony twice as strong as a common one, and get twice as much honey!" Farm and county rights for sale. We did not invest. No practical bee-keeper would give 10 cents a cart load for such new-fangled patent contraptions.

Most of the modern implements were on exhibition, and also the different races of bees in observatory hives. The crowds of interested questioners who huddled around the exhibit, showed that these object lessons were being studied.

The Iowa State Bee-Keepers' Association met during the Fair. The attendance was quite good, and the interest encouraging. It may be said to the credit of the association, that through its influence, that is, through the wise management of Messrs. Poppleton and Clute in arranging the premium list, the fine show was due. The premiums were liberal. That fact probably accounts for the interest taken by bee-keepers in the Fair, and was probably the cause of the large display.

The State association is as yet in its infancy, but the benefit to be derived from it is already apparent. The advantages which such an organization affords by way of acquaintance with co-laborers, the unity of action and purpose which it inspires, cannot but be beneficial.

Forest City,♂ Iowa.

For the American Bee Journal.

Summer Management of Bees.

W. H. STEWART.

About the middle of June our strongest colonies are ready for the supers. Those that are ready, and have their work well done in the brood-chamber, will begin to lay out on the alighting-board in small clusters during the heat of the day, and will have plenty of patch-work of new white comb at the top-bars, and attached to the cover board.

White clover is now in full bloom, and I add a second-story like the one that contains the brood-combs. I bring up from the brood-chamber a frame of hatching brood, fill its place with an empty comb or a frame of foundation, hang this frame of brood in the centre of the super, hang an empty comb each side of the brood, and if I have no more empty combs I fill the balance of the super with full frames of foundation. If frames only partly filled with foundation are hung in the supers, the bees will fill the balance of the frame with drone comb. If I have plenty of empty combs I prefer to fill the supers with them instead of foundation. Brush down all the bees from this frame of brood that is in the super, to make sure that the queen is not left to deposit eggs above. The same cover-board that was on the brood-chamber covers the super.

Thus prepared and provided with extra room, the bees will go immediately to work and fill the two frames next to the brood in the super; and if left to have their own way they will soon have all full, if the honey-flow is good. But if the frame of brood is allowed to remain there the queen is apt to deposit eggs in the lower part of the adjoining combs, and thus fill the super one-third full of brood. Thus it is better to remove this brood after two or three days, and give it to some weaker colony in exchange for an empty comb; but if no other colony has room for it, then move it over next to the wall of the super, and it will not be likely to induce the queen above while the brood is hatched out, and then the comb will be filled with honey.

Now, we have come to the time that calls into action all the brain and muscle that the apiarist possesses. The work in the supers must be closely watched, and as soon as the combs are sufficiently advanced, the honey must be extracted, or the super must be raised up and a third hive (or second super) filled with empty combs or foundation must be placed between the brood-chamber and this super No. 1 that is now nearly full. It will not do to let the bees lay idle for a moment at this time, for we have now only a few days in which we are to obtain our harvest, and if everything is not most closely attended to at this crisis, then all that we have done, or may do through the remainder of the year, will avail us nothing.

If one would wish to obtain the best quality of honey, then it is better to thus "tier-up" the supers, and allow the honey to remain with the bees until it is thoroughly cured. But if it is desired to get the greatest possible amount of honey, and to evaporate it mechanically, then it is better to extract it as soon as it is capped half way down the comb. If the second super is not given, and the combs are left after they are capped half way for the bees to complete the capping over the entire combs, it will be found that the last part of this work will advance very slowly.

It is time now that we begin to expect natural swarming, and it has been calculated that after we have thus prepared our bees for storing surplus, it is better to keep the entire force of the colony at work together, than to allow them to divide their strength by casting a swarm. This fact has often prompted the question, "How can we prevent natural swarming?" Many ways and means have been devised and given, and yet the question is repeated in nearly every convention. I, for one, doubt whether we will ever be able to keep bees in a prosperous condition through the forepart of the summer, and at the same time prevent natural swarming. I have, however, demonstrated the fact that bees, after they are prepared as above for "storing surplus," can be allowed to swarm and still retain the full working force, or so nearly so, that no practical difference can be perceived. I have given a full explanation of my plan on page 329 of the BEE JOURNAL for 1885. This plan may be so carried out as to allow the bees to cast the first swarm, and never an after-swarm, and never reduce the working force of the old colony.

For a few days before a colony casts its first swarm, the hive will be crowded full of bees, and during the heat of the day large clusters will often hang on the outside of the hive and remain idle until the temperature is reduced in the hive. I think that bees behave thus more for the fear that their combs will melt, than because of the want of air to breathe. These idle bees could just as well be working combs if it were safe for all to remain in the hive. When I notice them thus clustering out, I raise the hive-covers (not enough to allow bees to pass out or in), and slip the point of a small wedge into the opening, and the pent heat passes out; thus a healthy current is immediately moving up through the hive, and the cluster outside of the hive seems to be soon made aware of the fact, and will all enter the hive in a short time, and resume work. This plan works much better than giving extra ventilation below and none above. These wedges must be taken out at sundown.

Orlon, ♀ Wis.

For the American Bee Journal.

The Ohio State Convention.

EARLE CLICKENGER.

The bee-keepers of Ohio convened at State Fair on Sept. 2, 1886, and the following are a few of the questions answered at that meeting:

Who has had any experience with Syrian or Cyprian bees? Mr. Newlove claimed good results from Cyprians, and said that they are good workers but rather vindictive. Dr. Besse argued in favor of Syrians as being productive.

A. Benedict does not want too much late breeding in the fall. Mrs. Culp does not pay any attention to stimulating brood-rearing in the fall. J. Irick gave some good experience in stimulating and wintering bees. Mr. Jones, of Delaware county, claimed that he lets his bees take their natural course.

Mr. Benedict does not want too many late young bees reared in the fall, and compares them to late, unfeathered chickens, consuming more food in the first three weeks of their lives than afterward.

Is there any better bee than the Italian? No.

Would it be a good plan to introduce all the different strains of bees in the same apiary? Yes.

Is it best to remove old combs? Dr. Besse replied that old combs were the best to winter bees on, with the honey near the bees.

Earle Clickenger, of Columbus, said that he extracts his honey when partly capped; places the honey in jars in a warm room at a south window, leaving one cloth down in the honey, and another tied over the top. He finds that the honey will evaporate and thicken as well as when left on the hive, and with less expense and work.

It was confirmed that the display of honey on exhibition was the best ever shown in the State. The following is a list of premiums awarded: A. S. Goodrich, of Worthington, on comb honey, 1st premium; on extracted honey, 1st; on comb and extracted, 1st. Earle Clickenger, of Columbus, on comb honey, 2nd premium; on extracted honey, 2nd; on comb and extracted, 2nd; on honey-extractor, 1st; on bee-feeder, 2nd; on bee-hive, 2nd. Dr. H. Besse, of Delaware, wax-extractor, 1st premium; thin foundation, 1st; shipping-crate, 1st. Chas. Melane, of New London, best 12 sections, 1st premium; crate of comb honey, 1st. Aaron Benedict, Benington, nucleus of Italian bees, 1st premium; display of queen bees, 2nd. C. E. Jones, of Delaware, heavy comb foundation. 1st premium; shipping-case, 1st. J. W. Newlove, of Columbus, queen-bees, 1st premium; nucleus of bees, 2nd; wooden feeder, 1st; extractor, 2nd. Elias Cole, of Ashley, Bingham bee-smoker, 1st premium; uncapping-knife, 1st; bee-veil, 1st; bee-hive, 1st.

Columbus,⊙ Ohio.

Gleanings.

Sweet Clover for Honey.

J. A. GREEN.

There is a great deal of sweet clover in this locality, growing along the river banks and other waste places, as well as along the roads, which in some places are lined with it for miles. I find that most persons are apt to regard it as a nuisance along the roadside, and many land-owners wage war on it with more or less persistency and success. Some of the objections which they make to it are well founded, while others are unfounded or unimportant.

The principal reason why it is objected to, I think, is the fear that it may prove a noxious weed. It is a strong, rapid grower, readily becoming established, usually holding its own tenaciously when once it gets a start, killing out other plants, and spreading from year to year. These are the recognized qualities of the worst weeds; and the farmer who sees it march along the highway and settle down in front of his place, as though it had come to stay, is apt to be alarmed at the thought that some day it may perhaps take a notion to invade his fields in just that way. His fears are groundless, though. Its seed will not start in a close sod; cultivation readily kills it; and even after it has taken complete possession of the soil, close mowing, so as to prevent any seed from maturing for two successive seasons, will eradicate it completely.

I have ridden for miles along a road where all the space between the fences, except a narrow wagon-track, was thickly covered with sweet clover, yet not a single plant was to be seen inside the fields. I have occasionally seen sweet clover growing inside the fence along the roadside; but it is a suggestive fact that it is almost always the old tumble-down fence that lets the sweet clover through, while a good fence keeps it from the well-tilled fields beyond, as completely as it repels stray stock. There is a moral here, if you go deep enough.

Now, what can we say in favor of sweet clover, to the man who cares nothing about its value to the bee-keeper as a honey-producing plant? I can only say that it often takes the place of less desirable plants, and that its modest blossoms with their grateful perfume combine to render the highway beautiful and fragrant. Can we say anything more practical?

Many who object to the rapid spread of melilot on the highway, accuse the bee-keeper of planting it, when they themselves not only cultivate the ground, but sow its seed. Sweet clover, unaided, can do little to extend itself. Its seed is too heavy to be carried far by the wind, and it is not provided with any means of attaching itself to passing objects. The most efficient agent in distributing its seed is the man who leaves the ordinary track for the roadside when the roads are muddy in the spring. In this way the surface of the ground is broken up and prepared for seed, while the wheels of his wagon and the feet of his horses, sinking into the ground where seed fell the autumn before, pick up portions of the soil filled with the seed and carry it along for rods, and sometimes for miles, and there drop them to form a new nucleus of growth. Sweet clover is apt to spring up wherever any grading of roads is done; and the man who plows the roadside for the purpose of scouring his plows, though an enemy to humanity in general, is a friend to the bee-keeper in a sweet clover district.

While under favorable circumstances the seed will grow and do well if sown at any time of the year, it will be much more apt to grow on uncultivated ground if sown in the fall, so the snows and rains of winter and spring may beat it into the ground.

The sweet clover honey gathered here is nearly if not quite as light colored as that from white clover, while the flavor is, in my opinion, superior. When the honey is unmixed it requires no expert to tell that it was gathered from sweet clover, especially if freshly gathered. In extracting newly gathered sweet clover honey, the current of air coming up out of the extractor is laden with a perfume as distinct and unmistakable as that experienced by holding a bunch of the blossoms to the nose.

Dayton,♁ Ills.

For the American Bee Journal.

Sugar for Winter Stores, etc.

J. H. ANDRE.

For several months past this subject has been quite thoroughly discussed in the BEE JOURNAL. A great deal of it has been interesting, while some has been amusing. Some claim that it puts the price of honey down, and builds up the sugar business.

Suppose one does not use an extractor at all, but works his bees for comb honey; he has no honey to feed without either purchasing or using surplus. If he uses the latter, at say a cost of 12 cents per pound, and can get granulated sugar for 7 cents per pound, which will make syrup of the same consistency for less than half the cost per pound, does he make or lose? If he has extracted honey to feed it is a little better, but now suppose he takes it and trades pound for pound of sugar and uses it instead of honey (I prefer a pound of sugar to a pound of honey for feeding purposes); he disposes of his honey and gets sugar which answers his purpose better, certainly in quantity, and, so far as I can see, in quality also, for according to popular opinion it is no use to feed in the fall (see page 516), and not in the spring until pollen begins to come in; and at any time it does not make that daubing work that honey is apt to, unless care is used, and as it has but little odor it is not apt to call robber bees.

The usual price for extracted honey will purchase about one and one-fourth pounds of sugar for one-pound of honey, and if it will answer just as well, is it not like using a rake all day with half of the teeth out for the sake of *saving* one standing handy by in perfect order, to use honey instead of sugar? I fail to see how anything can be lost in disposing of an article and purchasing another that will answer the same purpose at less cost.

If my memory is right, sugar becomes cheaper each year, and if feeding it to bees helps the trade it must do it by an increase in the amount sold, instead of increase in the price. I have used sugar in the spring for the purpose of hurrying up breeding, and also to help fill up the brood-chamber, for I do not think one will get much surplus with a large empty brood-chamber, and I think for each pound of syrup fed, costing less than 5 cents per pound, I have received 3 pounds of comb honey. In regard to getting a name for selling sugar-honey, I am not at all afraid of it; each section is labeled "warranted pure," meaning that it was gathered from the flowers, and it is a pretty dear job to accuse of adulteration without proof. I make no secret whatever of telling wherever I sell my honey that I feed sugar in the spring.

Buckwheat furnished an unusual quantity of honey this season. For several days bees came in heavily laden late in the evening, and during a bad drouth too. They hardly ever work upon it here in the afternoon. But as I predicted some time ago, it all went into the brood-chamber, with the exception of a few strong colonies. Some stored 20 pounds of surplus from it. I shall be thankful if they have secured enough for winter stores. It is quite likely it will be mostly used in brood-rearing, and leave many colonies light in stores, but otherwise in a prime condition for winter.

One of my colonies gave me over 100 pounds of surplus; another 85 pounds. The average will be about 50 pounds per colony, spring count.

There was some frost here on the morning of Sept. 1, but so far as I have heard, it did no harm. We also had frost in July and August.

I wish to give a description of a knife that I use: Take a piece of cross-cut saw plate of ordinary thickness, draw the temper just enough so a cold-chisel will cut it, or if the chisel will mark it, do not draw the temper. Cut out a piece 7½ inches long, leave one end from 2⅛ to 2¼ inches wide, run it down tapering 4 inches in length to 1⅛ inches, also 1⅛ inches at the end. Dress off the edges smooth, drill three holes through the handle part, get a good piece of wood for a handle a foot or more in length, and dress one end of it in the shape you wish it for a handle. It should be quite large. With a rip-saw split it in the centre far enough for the handle, slip in the knife, fasten with screws and saw off the handle the length you wish. (Apple wood makes the best handle.) Do not grind the blade too thin nor too sharp. It should also be hard and stiff.

It is one of the neatest things about an apiary to clean sections and hives or pry frames loose. Three hours' work was all the time it took to make mine, and I would give $5 for one for one season if I had 20 colonies of bees to take care of, rather than do without one. If one cannot get the plate steel of the right thickness, it would be best to send to some cutlery manufactory and get it made, for a common blacksmith would not be apt to make a good one.

Lockwood, ♀ N. Y., Sept. 6, 1886. ○

For the American Bee Journal.

Convention at Indianapolis.

WM. F. CLARKE.

MR. EDITOR:—Your editorial remarks on the above subject, on page 563, are timely and impressive. They are well calculated to make us all,

> "Walk thoughtful on the sad and solemn verge
> Of that vast ocean we must sail so soon."

It affects me much to think how few are left of the "original charter members" of the North American Bee-Keepers' Society. I think you are in error when alluding to Prof. Cook as having been present at the meeting of Dec. 21, 1870. He was one of the most active in getting up the meeting, but, if my memory serves me correctly, he was not there. You speak of myself and Aaron Benedict as "the only ones found among the workers of to-day," who were on the committee that framed the constitution. Is not Elisha Gallup still "to the fore" as an "active worker" in California? I shall make a great effort to be at the Indianapolis meeting, and it looks very much as if I should have to say, if present, "I only am left!"

With the utmost good nature, permit me to rap your editorial knuckles for speaking of the forthcoming meeting as the "National Convention." From the outset, it has been "International" and "Continental." We Canadians are very sensitive on this point, and want to have it duly recognized at all times. I must admit that the programme looks very "National," as there is not a Canadian on it; but we are told there are "many good things yet to be added," which are not "sufficiently developed." I shall therefore hope that this deficiency will be supplied in a revised programme.

It is unfortunate that the convention comes at a time when several of our most prominent Canadian bee-keepers will be absent in England. D. A. Jones, President Pettit, R. McKnight, and S. Corneil are at the great Colonial Exhibition at Kensington, England, at which Canadian bee-keepers are making a grand display of honey with a view to creating a more extensive British market for that product. Owing to their absence, I fear there will be a kind of baulk in connection with the annual meeting of the Ontario Bee-Keepers' Association, which should be held next week, but which it is proposed to convert into an informal "bee-talk."

I have not yet heard of any other Canadian beside myself who proposes being present at the Indianapolis Convention, but when I meet "the brethren," as I expect to do next week at Toronto, I shall do my best to persuade some of them to go. It will be too bad if I have to "play a lone hand" as I did Dec. 21, 1870; nevertheless, even in that case, I shall try hard at least to score one point!

Guelph, Ont.

[Upon further investigation, we rather think that Prof. Cook was not present at the meeting on Dec. 21, 1870. Mr. Gallup has for more than ten years been lost sight of in bee-keeping circles; only once in awhile even writing a few lines for publication; he certainly is not "one of the workers of to-day." As to our use of the words "National Convention," Mr. Clarke is correct. It should be called "International" or "Continental." It is so generally called the "National Society," that we for once fell in with the crowd. We hope that there will be a large attendance at the International Convention of Bee-Keepers at Indianapolis.—ED.]

For the American Bee Journal.

Wintering Bees, etc.

O. N. BALDWIN.

Mr. G. F. Robbins, on page 567, asks for witnesses on the "pollen theory." He gives the evidence in brief that has been written out at length in the BEE JOURNAL, to show why bees die with diarrhea. If bees die from wintering on natural stores, our great King of the universe made a great mistake when He created the bees with an instinct to gather the nectar and pollen from flowers, and store it for their use in winter.

When we look around us and examine into the workings of God's law and see how carefully and wisely each cog fits its fellow pinion, we shake our head and say, thy foolishness is our wisdom.

It is hardly reasonable to think that those who advocate that bees will not winter on natural stores as well as sugar, really believe it is a fact. There is nothing in it, *absolutely nothing.* If you put your bees away in a temperature of 40°, with plenty of good natural stores, in a dry, dark place, with ventilation top and bottom, so that their breath will not mould and sour their food, you will not lose a colony from their eating pollen.

I obtained 4 colonies from a neighbor last fall, about Nov. 1. They had scarcely any honey, but were strong in bees. I moved them into my honey-house and transferred them on foundation in confinement. I then rendered the pollen, honey, wax, and strained all I could through a sieve, and added sugar and water to make 10 gallons of thick syrup. I took the wax off the top when all was cold and fed the rest to the bees. These bees were not allowed to have a flight till Dec. 31, when they were taken out of the cellar (where they were removed to from the honey-house after feeding), and were left out to fly four days during the warm weather of the first of last January. On Feb. 16 they were again put out, and two of the strongest colonies were dead, but upon examination they had not died until they had eaten all of the pollen and honey (died for want of pollen). The two still alive were put back and fed after having a flight, and taken out again on April 1 to stay.

I keep my bees in a dry cellar, light, tight, at a temperature of about 40°, with ventilation top and bottom sufficient to keep the combs from molding, and I never lose any only from the want of pollen and honey. Try it, and you will never have to save your bees by giving them taffy.

I notice that Mr. F. A. Ticknor says on page 568, that the apiarist who does not get an average of 150 pounds of honey and one swarm from each colony, spring count, is not up to the standard in bee-culture. I would like to put Mr. Ticknor and his bees on our pasture for one season, when I think I would convince him that this world is not all a garden of Eden for bees to work in. Yet I consider that I have done well to get 50 pounds per colony, when my neighbor, not 40 rods away, has not obtained 50 pounds from 30 colonies the whole season, and another only 125 pounds from 40 colonies.

In answer to Query, No. 302, to prevent after-swarms, the method given by G. W. Demaree is *par excellence.* I have tried it, and I am satisfied that it is the most practical plan. But I do not just understand how to keep bees from issuing the first time, provided one has all the bees he wants, and does not desire increase.

I have been experimenting the last two years in fertilization of queens by artificial means, and have this year made a complete success of it. Out of over 200, only one proved faulty, and I now believe that it is not necessary to ever have a failure. The trouble is not in the queen, as has been so much reported; she may be fertilized at any time within an hour after she crawls out of the cell, or when she is 20 days old.

Clarksville,♂ Mo.

For the American Bee Journal.

Chief Cause of Foul Brood.

GEO. H. HOYLE.

The following are some of the facts I intend to prove; and I hope I state them plain enough, that those who wish to argue the question, can see exactly the position I take:

1. That the disease is not contagious, in the manner generally supposed.
2. That it cannot be cured by drugs or starvation.
3. That it does not appear (of any moment) in a good honey season.
4. That most cases can be cured by extracting and boiling the honey and feeding it back; and that any case can be cured by feeding good honey or sugar syrup; except in a very few rare cases where the fault lies with a puny, no-account queen.

I claim that the chief cause of this disease is bad honey or honey-dew. Whether some of the inferior honey-dew gathered by the bees is poisonous to the larvæ, or whether it lacks the necessary essentials for the larvæ's healthy development, I am unable to say. It is certainly one way or the other.

A little over a year ago, when I was trying to cure my bees of foul brood, I was as firm a believer in the germ theory as any of my readers can possibly be; but since having a great deal of experience with the disease, and having read every thing on the subject in the bee-papers, I am firmly convinced that bacteria never attacks the larvæ of the honey-bee except when the larvæ are weakened, or ill from some other cause; and, that there is no remedy known that will benefit a colony of bees afflicted with the disease, unless it is accompanied by good healthy food. In fact the food is all that is necessary.

It has been a puzzle to a great many bee-keepers, why bees would carry the disease in the honey and not on their bodies. Considering how small the spores are said to be, and regarding the disease from the germ-theory stand-point, that they do not carry the disease on their bodies is a wonder indeed. That "the disease is carried in the honey," is admitted by nearly every writer on the subject; although the germs in the honey have yet to be discovered by the microscopist. I say it is in the honey too, but not the spores of the bacteria, but that the honey is from some other cause unfit for the use of bees in brood-rearing. As to the bees carrying the disease in the honey, why, certainly if the honey is unfit for the larvæ in one hive it is unfit for those in another.

To those whose bees have the disease, I wish to say that if they were to burn everything connected with their apiary, and commence again, their bees would be just as apt to have it next year as they will be if they keep the same combs they have now. The advocates of the different cures have sufficient reasons for their beliefs, and I respect them as much as I ever did; for I do not believe (as some writers seem to) that in order to gain popularity in my belief, I must depreciate the works and good understanding of those who happen to differ from me.

Mobile, ♀ Ala.

For the American Bee Journal.

The Season of 1886, etc.

ASA PINKERTON.

When the honey season commenced I had 106 colonies, the most of them in pretty good condition, but I was behind with sections; yet I thought I was all right, as I had the best kind of a hired man, and we had the garden and field work all in good shape. But just when the honey season commenced my man was taken sick, and continued so for a month, so that left too much work for myself, and I was depending upon a neighbor to furnish me with sections, and he got behind and let me get clear out of sections twice before the honey season was over.

But after all the trouble, I got a little honey, and increased my bees to 170 colonies. I have taken off 5,164 pounds of comb honey, and I think I have 100 or 200 pounds to take off yet, and I will have over 6,000 pounds of extracted honey. I feel that I have been paid for my trouble, if I did work hard, and you can guess whether I had to work or not, as for quite awhile that I had from 5 to 12 swarms per day. I put all second-swarms back.

I told a man one day that the time would come that we would have the bees trained to swarm and go into the hive themselves, and that same day, just after dinner, I had a large swarm come out, and they made a few whirls and came over the top of the cherry trees and right down to the ground and into a hive that I had placed on a stand three or four days before. That was June 12, and they filled their hive and stored 56 pounds of honey in the sections. I had one swarm issue on June 7, and I picked up the queen in front of the hive, and she had no sign of a wing. I hived them, and they filled the hive and stored 112 pounds in the sections, and the old colony stored 79 pounds in the sections. The best colony I had that did not swarm produced 142 pounds in the sections.

I notice on page 551, a chapter of lamentations written by Joe King. I am not acquainted with the gentleman, but I think that the bee-stings and the wonderful quantity of honey, and great heaps of money, must have affected his mind as well as his nerves, or else his house is not so very strong, as I have been told by a lady that he only has a few bees and about a wagon load of honey. For myself, I have not been alarmed yet, though I sleep under 4,000 pounds, and eat under 5,000 pounds of honey, and I never think of getting "sweetened up." I have been selling from 25 cents to $39 worth every trip, and I do not have any fears of the bank's breaking, as long as I can furnish them plenty of money; nor I do not fear burglars, as long as it is warm enough so I can sleep with the doors and windows open. My pockets are all right, and if they do wear out, a ½-pound of honey will get cloth for a new pair.

Should the above appear in the BEE JOURNAL it might be the means of Mr. Joe King and his neighbor bee-keepers getting better acquainted.

Marshalltown,⊙ Iowa, Sept. 1, 1886.

For the American Bee Journal.

Feeding Sugar to Bees.

H. E. HILL.

I think that few, if any, will dispute Mr. Hutchinson's claim, that "whether lowering the price of honey will put bee-keeping down, depends altogether upon what lowers the price." But if the price is lowered as the result of producers' giving the public occasion to believe that honey is obtained by feeding sugar (which Mr. H. acknowledges to be a *fair* objection to the use of sugar), are "bee-keepers more prosperous than ever?" I think not.

Then Mr. Hutchinson broadly refers to "sugar feeding," the "extractor," "comb foundation," etc., as "improvements in bee-keeping." I frankly acknowledge this to be too deep for my comprehension, as I have yet to learn why the use of an article that ("fairly") gives grounds for suspicion, thereby decreasing the demand, and consequently the price of our product, should be regarded as an "improvement."

As another excellent feature of sugar to bee-keepers, Mr. Hutchinson infers that by its use the cost is reduced. This needs only to come before the notice of some benevolent enthusiast to cause a repetition of the "Wiley" sensation. I think the article, as it is copied from one paper to another, will stand: "A prominent Michigan apiarist says," etc. However, we will *suppose* again, that by the use of sugar the cost of producing honey could be reduced 25 per cent., and as the result of giving the public "fair" ground for making "unjust accusation" and circulating false statements, the returns from our business are reduced 40 per cent., is the prosperity of bee-keepers advanced by the practice?

I have never known any one to dispute that the extractor was an improvement in apiculture, and with one or two exceptions I believe comb foundation was heartily welcomed by all as a decided improvement; but when an "improvement" requires several years of writing up to convince a very small per cent. of bee-keepers that it is otherwise than an absolute curse to our business, and its advocates are compelled to acknowledge that it "may" give cause for unjust accusation. I think the term "improvement" is scarcely applicable.

Thanks, Mr. H., for your correction, and if you will act in accordance with the suggestion, by stating "the *pro rata* loss of bees wintered on sugar stores compared with that of those wintered on natural stores," although it may not assist your argument a very great deal, you will confer a favor upon many readers of the BEE JOURNAL.

With regard to "Shall we stop using foundation?" Foundation is made from pure beeswax, which is solely the production of the apiary, and certainly its use should not be abandoned on the grounds that "sugar feeding" is objected to.

Titusville, δ Pa.

For the American Bee Journal.

Experiments in Bee-Keeping.

F. M. JOHNSON.

In three Langstroth and two American hives placed in a dry, dark cellar, with no extra ventilation, I observed that with the temperature at 36° (during a cold spell last January), the colonies (all strong) were buzzing quite lively. At the same temperature in February, they were all quiet, the 5 colonies, however, seemed a little uneasy, having closed top frames except a row of small holes across the centre of the frames. Moisture would condense and drip from the hives. When taken out on March 18, the combs were damp and moldy, which was not the case with the other 3; having porous material over them, not half a tea-cupful of dead bees was taken from all of them, and no sign of any disease.

At the commencement of apple bloom I transferred those in American hives into Langstroth hives, which were first to swarm. All did well until the drouth was fairly on, when they loafed about as too many others do that do not produce honey, or anything else, in fact.

To experiment, I used plain foundation starters in sections on four different hives, placing from two to ten in different parts of the case; in every instance the bees would nearly or quite fill the sections where pressed foundation was used, and would not work on the plain, only as they were compelled to, which is in harmony with the answers given to Query, No. 283.

I also tried one tier of sections with open sides as well as top and bottom, in the centre of case with division-boards out, so that they might have fair sailing over and around them. They went into the end tiers first. I think they will answer in hot weather with a good flow of nectar. I do not want them, or plain foundation either. I also tried Dr. Tinker's suggestion, of dividing the sections into groups of two to five, by wood and tin separators; but I could perceive no difference as to straightness of combs or ortherwise.

I use sections 5¼x5¾x1¾ inches, three tiers with ½-inch division-boards, which fills the case; or two tiers crosswise of the frames, with ½-inch division-board, which I prefer, with the ends of cases rabbeted for shallow frames. I can change from producing comb honey to extracted in the whole or in a part at any time with the same case. The division-board is flush with the top of the sections. A strip of thin iron ¾ of an inch wide, put on with two small screws, renders the case invertible; which I have tried with good results. I prefer a bottom-board just the size of the hive, ⅝ or more thick, with a cleat ⅞x1½ inches nailed on its back end, and one 5 inches wide at the front end, which is 3½ inches for alighting-board, with the end of the bottom-board beveled also. The inner edge of the end board of the hive prevents storms from beating into the hive. It is clamped or hooked to the hive.

Augusta, o~ Iowa.

North American Bee-Keepers' Society.

FRANK L. DOUGHERTY.

The North American Bee-Keepers' Society will hold its 17th annual convention Oct. 12, 13 and 14, 1886, at Indianapolis, Ind. The meeting will be held in Pfofflin's Music Hall, 82 and 84 North Pennsylvania Street, one of the most pleasantly situated halls in the city, having good ventilation and plenty of light. The Society head-quarters will be at the Occidental Hotel, corner of Washington and Illinois Streets. The regular rates of this hotel are $3 per day; special rates for those in attendance at the convention, $1.50 per day.

The Northwestern Bee-Keepers' Society, the Indiana State Society, the Eastern Indiana, with various county and joint societies will meet in union with the North American, making it one of the most important meetings of bee-keepers ever held in the country.

Every thing possible will be done to make the meeting pleasant and entertaining. An earnest, cordial invitation is extended to all.

The following is the programme for the three days:

FIRST DAY—TUESDAY.

Forenoon Session, 10 a.m.—Convention called to order. Address of welcome, by Gov. I. P. Gray; "Response" by the President, H. D. Cutting; "Welcome to the City," by Mayor Caleb S. Denny; "Thanks," Dr. C. C. Miller, President of the Northwestern Society. Calling the roll of members of last year. Payment of annual dues. Reception of new members and distribution of badges; reports of Secretary and Treasurer. Announcements.

Afternoon Session, 2 p.m., Special Business.—Annual address of the President; "Bee-Studies," Prof. A. J. Cook, Agricultural College, Mich.; "Apicultural Journalism," John Aspinwall, Barrytown, N. Y.; "Bee-Literature," Thomas G. Newman, Chicago, Ills.; "The Coming Bee—What encouragement have we to work for its advent?" R. L. Taylor, Lapeer, Mich. Subject for discussion, has "Apis Americana" been reached?

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions that may have accumulated during the day.

SECOND DAY—WEDNESDAY.

Morning Session, 9 a.m.—Announcements. Communication. Call of the Northwestern Society to elect officers. Election of officers of the Indiana State Society. Call to order. "Rendering Comb into Beeswax," C. P. Dadant, Hamilton, Ills.; "Foul Brood," A. J. King, New York. "North American Bee-Keepers' Society—Past, Present and Future," Rev. W. F. Clarke, Guelph, Ont. Selection of place for holding meeting in 1887. Election of officers.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. "Bee-Keeping and Apiculture," Prof. N.W. McLain, U. S. Apicultural Station, Aurora, Ills.; "Feeding Bees for Winter," Jas. McNeill, Hudson, N. Y.; "Wintering Bees," Dr. J. B. Mason, Wagon Works, Ohio; "Solid Truths relative to the Apicultural Interests of the east coast of Volusia county, Florida," by John Detwiler, New Smyrna, Fla. Subjects for discussion, "Is the use of Foundation Necessary in Modern Bee-Culture?" "Are Perforated Honey-Boards a Success?" Unassigned essays.

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions in question-box. Social communications.

THIRD DAY—THURSDAY.

Morning Session, 9 a.m.—Announcements. Miscellaneous business. Communications. "The National Bee-Keepers' Union," by Thomas G. Newman, Chicago, Illinois. "A Talk on Hives," by James Heddon, Dowagiac, Mich.; "Reversible Hives and Frames," J. E. Pond, Jr., Foxboro, Mass.; "Drones and Drone Comb," W. Z. Hutchinson, Rogersville, Mich.; Reports of Vice-Presidents; "Progress of Bee-Keeping in Indiana," Jonas Scholl, Lyons Station, Ind. "The Future of Bee-Culture," G. W. Demaree, Christiansburg, Kentucky.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. Explanation of various articles on exhibition.

Indianapolis, Ind.

Convention Notices.

☞ The annual meeting of the Kentucky State Bee-Keepers' Association will be held at Frankfort, Ky., on Oct. 6 and 7, 1886. All interested in bee-culture are earnestly requested to attend and help to make this meeting a pleasant and profitable one. The State Centennial will be celebrated at Frankfort, on Oct. 7, and excursion rates can be obtained on all railroads. A large attendance of bee-keepers is solicited. JNO. T. CONNLEY, *Sec.*

☞ The St. Joseph, Mo. Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.

E. T. ABBOTT, *Sec.*

☞ The Sheboygan County Bee-Keepers' Association will meet at Chandler's Hall, at Sheboygan Falls, Wis., on Saturday, Oct. 16, 1886, at 10 a.m.

MRS. H. HILLS, *Sec.*

☞ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. BALDWIN, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, *Sec.*

☞ The southern Illinois Bee-Keepers' Association will hold its next meeting at Benton, Ills., on Thursday, Oct. 21, 1886. F. H. KENNEDY, *Sec.*

Local Convention Directory.

1886. *Time and place of Meeting.*

Oct. 6, 7.—Kentucky State, at Frankfort, Ky.
Jno. T. Connley, Sec., Napoleon, Ky.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 16.—Sheboygan Co., at Sheboygan Falls, Wis.
Mrs. H. Hills, Sec., Sheboygan Falls, Wis.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Oct. 21.—Southern Illinois, at Benton, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Favorable Season.—W. J. Cullinan, Mt. Sterling,+o Ills., on Sept. 9, 1886, writes:

This season may be classed among the favorable seasons for this locality. My bees averaged 60 pounds of comb honey and 11 pounds of extracted up to Sept. 1, after leaving them ample stores for winter; and they are now storing honey as rapidly as at any time during the summer. I could have secured 150 or 200 pounds more honey only for rearing queens. I find it expensive business to rear queens early in the season. We had a nice rain last evening, which will help the flow in this vicinity.

Heavy Fall Flow of Honey.—Wm. H. Graves, Duncan,⊙ Ills., on Sept. 10, 1886, says:

I now have 100 colonies of bees. I have had one of the heaviest flows of fall honey I ever saw up till now. Bees are still at work, mostly on black-heart. I live on Spoon river, and the bottoms are covered with it.

The Lexington, Ky., Fair.—N. H. Rowland, Keene,⊙ Ky., on Sept 9, 1886, writes:

The Lexington, Ky., Fair has just closed. It was, as ever, a splendid show. The exhibition of "live stock" was not to be excelled, and rarely equalled in the world. The attendance was the largest ever known in the history of the association. Among other distinguished visitors was the Governor of Utah, who is a native Kentuckian. The bee and honey department was represented chiefly by the Mucci Bros., who showed some very fine imported queens, together with the original packages in which they were expressed from Italy. They also exhibited two cages in which they had received two queens by mail from Italy. Mr. Mucci told me that he had succeeded after much trouble and correspondence in getting them by mail direct from Italy. A "spring frame hive" was exhibited by Mr. Martin—the same hive which took the premium at the New Orleans Exposition. Careful examination revealed no new feature of any practical benefit. The frames have no projecting top-bars, but rests on legs; a brass wire in each end of the frame slips in a saw-cut in the end of the hive, and holds the frame laterally, but does not support the weight of the frame when full of honey, consequently any operation requiring the super to be lifted would allow every frame to slip out of the hive! There are also two sizes of frames in each hive, which fact alone would preclude its extensive use. The old gentleman is an enthusiast, however, and thinks he has a bonanza! Mr. W. Frank Storm, a bee-keeper of the city, made conspicuous by his badge of scarlet and gold lace, was on hand showing and explaining to the curious and interested. Everything shown was neat and attractive.

Good Results.—D. S. Way, Urbana, ♀ Iowa, on Sept. 8, 1886, writes:

Bees are in splendid condition in this part of the country. I have extracted 1,200 pounds of white clover and basswood honey from 14 colonies, this season, which I think is good for a new hand at the business.

Cleaning Bee-Smokers.—Robt. Corbett, Manhattan,♂ Kans., says:

For cleaning the nozzle of a bee-smoker, take a piece of hard wood the full size of the base of the nozzle, tapered to fit completely. Rim off one corner and insert a steel or iron plate at right angles, having the same bevel. Use this while the nozzle is hot, as a scraper, followed by a swab of the same taper, and you can keep your smoker in order. If it is not in order the force of the bellows, in a measure, is lost. To tell 3, 4, or 6 months ahead, when a cold spell is coming in the summer: Whenever the moon news or changes, with the sign of or zodiac in the neck, we will have frost in all the Middle States, and cold in the more southern States. No matter whether in May, June, July or August, it is sure to come at the time.

My Experience with Bees.—Rev. J. Hunt, Plain City,⊙ Ohio, on Sept. 14, 1886, writes:

I have been engaged in the bee-keeping about ten years. I have now about 20 colonies; I have had more at times. I started with one colony of Italian bees, bought for $12, and all I have now have sprung from them. I started with no experience, but with enthusiasm and hope; I have made some mistakes, and met with losses, especially in wintering. Several persons in this vicinity have taken up bee-keeping, but became discouraged and gave it up. They found that it took as much time, money and calculation to make a dollar as it would average in other kinds of business. When I commenced, white clover honey in boxes sold for 25 cents; now the best comb honey in sections is sold for 17 cents; probably to fall still lower. To have an outfit in an apiary of what is convenient and necessary, is expensive, and unless one is a good mechanic and aims to keep down expenses, he will find it difficult to pay them out of his bee-profits.

Building Combs on Trees.—Grant Stinger, Unadilla,o+ Neb., on Sept. 6, 1886, writes:

On Sept. 1, 1886, I found a swarm of bees on a box-elder tree, that must have been hanging there longer than bees usually do when they swarm, as they had built comb enough to fill 5 Langstroth frames, had brood hatching out, and were going on with their work as busily as if they had been in a hive. They had nothing over them but the green leaves and blue sky. Is not this strange? I have 8 colonies of Italian bees; can I winter them successfully in chaff hives out-of-doors?

[It is not usual for bees to locate and build combs without anything to protect them from the weather. You can successfully winter bees in chaff hives on the summer stands if not in a locality too cold or too much exposed.—Ed.]

A Kentucky Bee-Killer.—Clarence M. Weed, Champaign, o+ Ills, writes:

Mr. G. H. Lillard, of Napoleon, Ky., sends a specimen of a large black and yellow fly much resembling a bumble-bee, stating that "they catch the bees and suck the life from them;" and asking to what species it belongs. The insect proves to be *Mallaphora orcina* Weid, which, so far as known to the writer, has no common name to distinguish it from the several other bee-killers or bee-catchers. It belongs to the great family of predatious two-winged flies, *asilidæ*, and hence is related to the Nebraska bee-killer (*Promachus bastardii*). This specie measures an inch in length, with a wing expanse of 1¾ inches. An excellent description with a rather poor illustration of it may be found on page 320 of the eighth edition of Prof. Cook's Manual of the Apiary. Of the habits of these flies, Prof. Cook writes: "Their flight is like the wind, and perched near the hive they rush upon the unwary bee returning to the hive with its full load of nectar, and grasping it with their hard strong legs, they bear it to some perch near by, when they pierce the crust, suck out the juices and drop the carcass, and are then ready to repeat the operation. A hole in the bee shows the cause of its sudden taking off. The eviscerated bee is not always killed at once by this rude onslaught, but often can crawl some distance away before it expires."

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1½c. per light, extra.

◆

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at $6.00 each.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

☞ **Sweet Clover,** or *Melilotus Alba,* is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers before Jan. 1, 1887.

◆

The Latest Thing in the way of cheap books is a complete, unabridged, and illustrated edition of "The Count of Monte-Cristo," by Alexander Dumas, just published by T. B. Peterson & Brothers, Philadelphia, in a large octavo volume of six hundred pages, for 50 cents, making it one of the cheapest books ever published.

◆

☞ All are respectfully invited to attend the next meeting of the Bee-Keepers' Association of Eureka Springs, which will be held at Eureka Springs, Ark., on Oct. 23, 1886. Business of importance to every bee-keeper Northwest Arkansas will be before the meeting.

DR. S. S. PURCELL, *Sec.*

◆

North American Bee Keepers' Society

The Chicago, St. Louis & Pittsburgh Railroad ("PAN-HANDLE ROUTE") take pleasure in hereby announcing to all delegates and their families desiring to attend the National Convention of Bee-Keepers' Union to be held at Indianapolis, Oct. 12, 13, and 14, that we have arranged to sell tickets to Indianapolis and return at $7.30 each on certificate signed by Mr. Thomas G. Newman, General Manager Bee-Keepers' Union.

Tickets good going Oct. 11, and returning up to and including Oct. 16.

Morning trains leave Chicago, from the Union Depot, at 8:30, reaching Indianapolis at 3:50 p.m. Evening train leaves at 8:30. Night train has through sleeping-car, and day train has through parlor-car to Indianapolis.

We can offer you superior accommodations and would be pleased to receive your patronage.

Tickets will be on sale in exchange for certificate at Union Passenger Station, corner of Canal and Madison Streets, Chicago, also at 65 Clark Street, corner of Randolph Street.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 7 a. m., Sept. 20, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—It continues to arrive very freely The demand is light and sales are made chiefly at 12@13c. Extracted is also quiet with prices unchanged, 6@7c.

BEESWAX.—It is easier, and 23c. is about all will bring.

R. A. BURNETT, 181 South Water St.

NEW YORK.

HONEY.—The market for the new crop of comb honey is just opening. We note an improvement in sales and prices. Most of the comb that has arrived is badly colored, which makes it second grade, which we suppose is due to a poor season and long finishing. We quote 1886 crop as follows; Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6¾@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in and selling fairly well, but the recent hot wave has checked it some. We have heard from most of the bee-men of Addison county, Vt., and they report that there will be but half a crop in that section. We are selling one-pound packages of white clover honey at 14@15c.; 2 pounds at 13@14c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Best white in one-pound sections is bringing 14 cts.

BEESWAX.—Firm at 23c. for fair quality.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—The market is very quiet. Demand from manufacturers is slow, and there is only a fair trade in new comb honey and extracted in square glass jars. Extracted honey brings 3 1-2@7c.; comb honey, 12 to 14c. for good to choice, in the jobbing way. Prices are low for all produce and no speculative feeling is noticed anywhere. Unless better prices are realized for other produce, prices of honey are not likely to advance.

BEESWAX.—It is in good demand and arrivals are fair. We pay 20c. for good yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The demand for honey is not very lively at present, but prices are steady. Choice new honey in 1-lb. sections is selling at 14c; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is active and sales of the comb are large. Extracted is firm with no stock in the city. We quote: One-pound sections of white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 8@10c.; 2-lb. Calif. white sage, 10@11c; dark 2-lbs., 8@9c. Extracted white clover, 7@8c.; dark, 4½@5¼c.; Calif. white sage, 5½@6c.; dark, 4½@5c.

BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is about the same as when last reported—may be quoted a little lower to sell. Choice comb in 1-lb. sections, 12@13; 2-lbs., 11@12½ cents; dark not wanted. Extracted, white, in kegs, 6@6¼c.; same in tin cans, 6 1-2@7c.; dark in barrels and half-barrels, 5@5 1-2 cts.

BEESWAX.—No demand.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The demand for honey remains very good for fine qualities, and they are readily taken for home consumption, and shipments to Europe and the East at 4@5¼c. job here. Most of the honey is held at 4½c. and more, and it seems that sooner or later such prices will be paid, as offerings are rather small. Comb honey is not sought after so far, but with the colder weather more demand will come in, and as supplies are rather small, we anticipate full prices. We now quote 7@10c., as to quality, wholesale.

BEESWAX.—It is dull, but buyers have to pay 22@23c. for choice lots.

SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Receipts are light and the market is very quiet. We quote: White extracted, 4@4½c.; amber, 3¾c. Comb, 8½@10c. for white.

BEESWAX.—19@22c.

O. B. SMITH & CO., 423 Front Street.

Advertisements.

ONE HUNDRED

Large, Handsome and Extra-Prolific Select Tested Italian Queens

$1.50 Each, or Three for $4.00,

By return mail. Safe arrival guaranteed. Make Money Orders or Postal Notes payable at Salem, Mass. Address, **HENRY ALLEY,**
38A2t WENHAM, MASS.

TO HORSE-OWNERS.

Peck's Ring Bone & Spavin Cure.

A new discovery. Warranted to cure any case of Ring Bone and Spavin without blistering or removing the hair, or money refunded. Price, $1 per box, with full directions; prepaid to any address in the United States or Canada.

Address, **D. S. PECK & CO.,**
PENN YAN, Yates Co., N. Y.

For reference: Miller & Beebe's Subscription Agency, Penn Yan, N. Y. Name this paper.
38A2t

THE LARGEST

Bee-Hive and Section Factory

IN THE WORLD.

GREAT REDUCTION!

UNTIL January 1st, we will sell at a discount. Write for Reduced Prices.

G. B. LEWIS & CO.,
37Atf WATERTOWN, WIS.

BEES and HONEY for SALE.

I OFFER to sell Good Full Colonies of Hybrid Bees at $4.00 per Colony; 50 or more at **$3.50** per Colony. **HONEY** for Sale at 12½ cts. Call on or address,

R. S. BECKTELL,
36A3t THREE OAKS, MICH.

THE AMERICAN APICULTURIST

SENT one year, and a **Tested Italian Queen**, to each subscriber—all for $1.50. Sample copies free. Address,
30Atf **HENRY ALLEY, Wenham, Mass.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

W. Z. HUTCHINSON,

Is rearing Italian Queens for sale again this season, and can furnish them, by mail, safe arrival guaranteed, as follows: Single Queen, $1.00; 6 Queens for $5.00; 12, or more, 75 cts. each. Tested Queens $2.00 each. Make Money Orders payable at Flint. Send for price-list of Bees (full colonies or by the pound). Given Foundation, Hives, Cases, Feeders, White Poplar Sections, etc., etc.

W. Z. HUTCHINSON,
8Etf ROGERSVILLE, Genesee Co., MICH.

SECTIONS and FOUNDATION.

1-lb., all-in-one-piece,	40c per lb. for heavy.
V-Groove, $4 per 1,000	50c " " light.
Less for lots of 10,000	Send for Samples and Price-List.

A. F. STAUFFER & CO.,
15Etf STERLING, ILLS.

Bees for Sale.

50 COLONIES of Italians in 11-frame Langstroth **HIVES**, with nearly all young Queens. Will sell at once at **$4 00** per Colony—as I am going to Nebraska. **L. ADAMS,**
36E3t MAYFAIR, Cook Co., ILLS.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

ATTENTION, BEE-KEEPERS!!

NOW is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates: 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
32Atf COLERAINE, MASS.

Golden Italians.

WARRANTED Queens 75 cts. each; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,

JAMES WOOD, North Prescott, Mass.
20A20t

THE HORSE,

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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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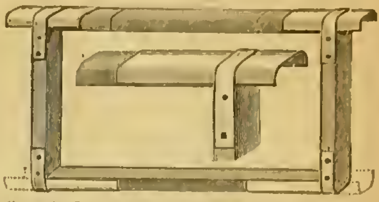

Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. **F. M. JOHNSON,**
WASHINGTON DEPOT, Litchfield Co., CONN.
32Atf

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

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33A13t

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

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It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, $1.00, postpaid.

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6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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13,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25**. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1A1y Agricultural College, Mich.

HOW to WINTER BEES.

THE October number of the **American Apiculturist** will contain essays on **"Wintering Bees,"** from the pens of **James Heddon, G. M. Doolittle, A. E. Manum, Prof. Cook, Dr. Tinker, J. E. Pond, Ira Barber, J. H. Martin,** and other equally prominent apiarists. Every bee-keeper should secure a copy. For ten cents in stamps this number will be mailed to any address on September 25. No specimen copies of this number will be sent out.

Regular subscription price $1.00 per year. Single copies 10 cts. each. Copies of back numbers will be sent free. Address,

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33A6t WENHAM, MASS.

Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

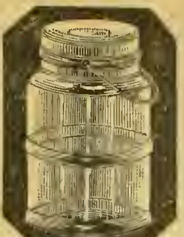
The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	$1.60
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INVERTIBLE FRAMES,

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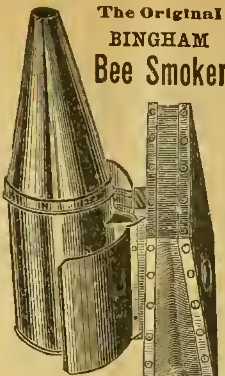

Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

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BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am *boss*—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

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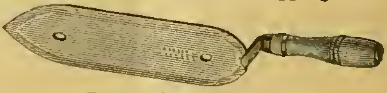

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Prices, by mail, post-paid.

Doctor smoker (wide shield)	..3½ inch..	$2 00
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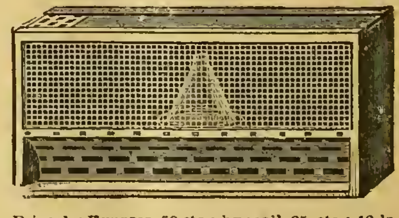

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I AM now prepared to supply dealers and others with **Hives, Sections, Shipping-Crates, Supers, etc.,** of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Sept. 29, 1886. No. 39.

Sweet Clover has another credit mark. Mr. C. F. Muth, who has kept bees for many years, says that this season is the first time that his bees ever gathered much honey in July. He says that it is all owing to the sweet clover growing profusely on the surrounding hills.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

We have made arrangements by which we can supply the Weekly AMERICAN BEE JOURNAL and the Monthly *Bee-Keepers' Magazine* for 1887, both periodicals for the very small price of $1.25, or the above and *Gleanings* for $2. Three bee-periodicals for the usual price of one !

Married, on Wednesday evening, Sept. 1886, at the residence of the bride's mother, at Wilmette, Ills., by Rev. J. D. Leek, Miss Sallie A. Ward and Mr. George W. York, (an employe at the office of the BEE JOURNAL, and who is known to many visitors at this office.) Our congratulations are extended to the happy pair, and we hope they will never regret this important event of a lifetime.

Badges for the Indianapolis Convention.—The Corresponding Secretary of the North American Bee-Keepers' Society (Mrs. Robbins) is getting up a very pleasant surprise to those attending the convention at Indianapolis, in the way of badges. With the good taste Mrs. Robbins has always displayed in such matters, it will, no doubt, be a badge of which we shall all be proud, and carry to our homes as a beautiful memento of our visit to Indianapolis.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

Among the Many scores of visitors at the office of the AMERICAN BEE JOURNAL during the past week, the most distinguished visitor was Mr. J. S. Harbison, of San Diego, Calif. Mr. Harbison is one of the pioneers of modern bee-culture, and figured quite largely in the bee-literature of a quarter of a century ago. He is the author of a bee-book, inventor of a hive and sectional frames for comb honey, as used on the Pacific Coast, and generally called "California frames." He is the most extensive bee-keeper in the world, owning from 3,000 to 3,500 colonies of bees, in many apiaries, and is noted for having the largest honey crop of any producer in the world. Next to Mr. Harbison comes Capt. J. E. Hetherington, of Cherry Valley, N. Y., who has about 2,000 colonies of bees. Strange to say that within half-an-hour after our distinguished visitor left, in walked Mr. O. J. Hetherington, of East Saginaw, Mich., brother to the Captain just mentioned.

We had an excellent visit with these gentlemen, as we did with many others who called on us, which space forbids our mentioning in detail, at this time.

Round Trip Tickets to the Convention.—As Manager of the National Bee-Keepers' Union, we have made arrangements with the Indianapolis lines of railroad for round trip tickets from Chicago to Indianapolis and return to Chicago, good from Monday to Saturday, Oct. 11 to 16, 1886, for $7.30. The fare one way is $5.50, and this is one fare and one-third. To obtain these tickets, it will be necessary to get a certificate signed by Thomas G. Newman, stating that the bearer is *entitled* to the reduced fare. Now, do not wait until you come to Chicago to get this certificate, for we may have gone before you come. Send for the certificate at once ; and it will be sent by return mail.

Red Clover Honey.—Quite a number have reported that this year their bees have gathered honey from red clover. Mrs. L. Harrison accounts for it thus in the *Prairie Farmer :* "In consequence of the drouth the clover heads grow small, and the tubes of the flowerets are short. This enables the bees to reach the nectar. There have been many conflicting reports, with reference to the utility of the red clover as a honey plant, but it is apparent that when the conditions are favorable for the production of small heads, either by reason of the soil or lack of moisture, Italian bees can reach the nectar."

The Publishers of the *American Agriculturist*, 751 Broadway, New York, will forward a copy free to every person who has been a subscriber to it, but is not now one (provided they send their name on a postal card), to the end that they may see the great improvements that have been made in that periodical. We club it and the AMERICAN BEE JOURNAL for $2.25 per year.

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

Stands at the Head.—The *Bee-Keepers' Magazine* says that sweet clover stands at the head of the list of honey-plants, and adds : "We know by personal observation the following facts in its favor, viz : The number of bees on it per square foot of clover is equal to the basswood when in full bloom. The length of bloom is greater than any other honey-plant we know of. The honey from it is of beautiful light color. It will secrete in the dryest, hotest, or rainiest seasons, and will thrive on almost any land. Rain does not wash the nectar from the flower. It secretes from daylight till dark. It is not hard to eradicate it from the soil when required."

The Bee, says an enthusiast, does not deface your fields by clipping the growing grasses, like the domestic animals ; it does not mar the garden plants or levy taxes on your grain. Bees differ from the whole insect world. No tree, shrub, plant or flower is injured by their presence. He might have added that without the presence of bees many of the plants would soon cease to bloom, and even cease to live. Bees are the best friends of horticulturists and fruit-growers.

Linden Honey is the name by which what has heretofore been called "basswood honey," is hereafter to be known in Canada. This has been decided by a committee appointed to consider the question of an appropriate name for that nectar. Now let it be also called by the same name in the United States. It is appropriate and much more euphonious.

To Indianapolis there are four routes from Chicago—the Kankakee, leaving at 9.10 a.m. and 8.00 p.m.; the Monon, 6.05 a.m. and 7.30 p.m.; the Pan Handle, 8.30 a.m. and 8.30 p.m.; and the Chicago and Eastern Illinois, at 8.00 a.m. and 8 p.m. every day. On all of these railroads the reduced rates for a round trip for $7.30 can be had upon the presentation of a certificate signed by Thomas G. Newman. We wish it to be distinctly understood that we have not been able to secure rates for any other points—only a round trip from Chicago to Indianapolis and return to Chicago. Several have written to us to get them reduced rates on other routes, and from other points—and we should be glad to do so, but have not been able to do it. We make this announcement to save correspondence on the subject. The tickets are good from Monday to Saturday, Oct. 11 to 16, 1886.

National Bee-Keepers' Union.—There will be a meeting of the officers an members of this Society at Indianapolis, Ind., on Wednesday, Oct. 13, 1886, at an hour to be announced at the meeting of the North American Bee-Keepers' Society, to consider business of importance.

THOMAS G. NEWMAN,
General Manager.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Uniform Temperature in Hives.

Query, No. 310.—Is there any practical method by which practical uniformity of temperature can be maintained within a hive in the winter season, when wintering on the summer stands? If so, what is that method?—R.

No.—DADANT & SON.

I do not know of any—G. M. DOOLITTLE.

I doubt it.—C. C. MILLER.

I know of nothing better than surrounding the hive with non-conductors of heat.—W. Z. HUTCHINSON.

Just the right kind and right quantity of "packing" might accomplish it.—JAMES HEDDON.

It is a question. Of course thick packing comes the nearest to it.—A. J. COOK.

Mathematically, no; but sufficient "practical uniformity of temperature can be maintained" by judicious and proper packing to answer all practical purposes for successful wintering.—J. P. H. BROWN.

1. I do not know of any. 2. A large colony well protected from the winds, with some absorbent on the tops of the frames that will allow moisture to pass off, and the heat to be retained.—J. E. POND, JR.

Yes, put a thin board cleated on top, with a half bee-space beneath, over the frames, and shut off all upward ventilation. Give a large entrance guarded against high winds, and protect the hive with 3 inches of fine, dry chaff or sawdust packed close all about the hive. Such preparation prevents currents of air through the hive and all undue loss of heat, enabling hibernation in early winter, and the best possible condition for breeding in late winter. With just enough combs to hold needed stores, it is the only highly successful methods of wintering out-of-doors.—G. L. TINKER.

There has been no attempt so far as I know, to keep up a uniform temperature in the hives while on the summer stands. There is certainly no practical method known to the art of man by which it could be accomplished. I have frequently thought that it would be practicable to raise the temperature in the hives at intervals during protracted cold spells, so that the bees could change their position, take food, etc. This might be done by introducing warm air into the hive by means of a very simple apparatus.—G. W. DEMAREE.

Alsike Clover.

Query, No. 311.—1. Is Alsike clover a hybrid clover? 2. How tall does it grow?—Cincinnati.

2. About a foot high here.—G. M. DOOLITTLE.

2. Nearly as high as red clover.—C. C. MILLER.

1. Yes. 2. From a few inches to 2 or 3 feet, depending upon the soil and season.—W. Z. HUTCHINSON.

It is said to be a hybrid between the common red and the white clover, hence the name *Trifolium hybridum.* Surely its appearance favors the statement. Its growth depends upon the quality of the soil. We have it 18 inches long on our light, sandy beds.—A. J. COOK.

Alsike is supposed to be a cross between red and white clover, and grows very tall, or rather long, sometimes, for when it reaches 6 or 7 feet in length, it ceases to stand up. Usually, however, it grows to about the length of red clover.—JAMES HEDDON.

1. It is supposed to be. 2. It will depend upon the soil and cultivation. It has been known to grow from 5 to 7 feet high under favorable conditions in this locality; this, however, is only a few stalks in a field. Two to 3 feet is an average.—J. E. POND, JR.

1. Alsike clover is said to be a hybrid plant. Whatever may be the facts, no close observer can examine the plant carefully without being impressed with the idea that it is a cross between two or more varieties of clover. 2. My experience is limited in the cultivation of Alsike clover. As far as I have tried it, it grows nearly as tall as common red clover. So far as my neighbor bee keepers and myself have tried it, it blooms profusely the second season after sowing, produces seed, and perishes like all biennial plants do.—G. W. DEMAREE.

Floating Pollen in Honey.

Query, No. 312.—It is admitted that all honey contains more or less "floating pollen" (so-called); can you give an analysis that will fully determine the proportion of pollen contained in both spring-gathered and fall-gathered honey? If so, please do so?—G.

1. Some think so. My opinion is, that it is "straining" at a "far-fetched" idea to protect the "pollen theory." 2. No.—G. M. DOOLITTLE.

I think no one can do this. It varies not only with different kinds of honey, and I believe at different times with honey from the same kind of bloom.—A. J. COOK.

I cannot; I have never seen any practical necessity for so doing, as I do not deem floating pollen a disadvantage but an actual neccessity, if early brood-rearing is desired or desirable.—J. E. POND, JR.

I cannot and do not know who can, but should think almost any chemist could. If all of the honey in our apiary was alike, I think such analysis would give us a grand cue as to the safe wintering of our bees.—JAMES HEDDON.

That is hardly a question for a man that makes his living producing honey, but for the chemist or amateur who keeps 2 or 3 colonies, and whose experiments are of more value to the fraternity than some are willing to admit.—C. C. MILLER.

It is not admitted that "all honey" contains pollen in quantity sufficient to have a practical bearing in an ordinary analysis of the article. Some honey contains more pollen than other honey does, for the reason that more of the farina of the flowers is floating in the air at one time than at another. Microscopically speaking, there is pollen in every thing, and everywhere during the summer months.—G. W. DEMAREE.

Guibourt, Calloux, Wurtz and other popular chemists give the analysis of honey. Probably the most reliable analysis is the one made by Dr. J. Campbell Brown, an English chemist. His average percentage numbers are as follows: Laevulose, 36.45; dextrose, 36.57; mineral matter, .15; water expelled at 100° C., 18.5, and at a much higher temperature, with loss, 7.81; the wax, pollen, and insoluble matter vary from a trace to 2.1 per cent. The amount of "floating pollen" in a given quantity of honey can be ascertained as a sediment by mixing the honey with water so as to make it very thin.—J. P. H. BROWN.

Honey contains pollen that may be seen by a microscope, but it is so little that practically it amounts to nothing. The theory that "floating pollen" in honey is ever a cause of disease in bees, rests upon the feeblest kind of evidence. No two samples of honey would be apt to contain the same proportion of pollen, whether fall or spring gathered, and I cannot think that if the average was known it would be of benefit, aside from curiosity, to bee-keepers.—G. L. TINKER.

Taste and Odor of Honey.

Query, No. 313.—My neighbor has been in the bee-business for a number of years, and says that his bees store honey from peppermint, and that the honey tastes and smells of the same. Will bees store honey that will taste and smell of the flowers from which it is gathered?—H. B.

Yes.—W. Z. HUTCHINSON.

Yes, of course.—DADANT & SON.

Yes, the aroma of flowers is contained in the honey obtained from them.—G. L. TINKER.

I have never tasted such honey except buckwheat. Even this does not have the exact aroma of the flowers.—G. M. DOOLITTLE.

I think it is so in general. Why do you not taste and smell the honey, and then you will know?—C. C. MILLER.

Yes. I think the bulk of the honey takes its flavor and aroma from the flowers from which it is gathered. These properties diminish with age.—J. P. H. BROWN.

All honey contains the aroma of the flowers from which it is gathered; and there is no reason why strongly aromatic plants like the mints should not give their distinctive flavor to the honey gathered from them.—J. E. POND, JR.

Yes, some honey will do so. I once received a sample of extracted honey from the South tasting so strong of tobacco that it was supposed by the owner to be worthless. I gave him a good customer of mine, who bought 3 or 4 barrels per year to moisten tobacco.—JAMES HEDDON.

I think this matter needs investigating. I should look about and see if some one had not been careless with the peppermint bottle. We have large peppermint plantations in Michigan, and I have never heard such a statement here. So far as I know fruit-blossom honey is the only kind that would suggest its origin by its flavor. And even in that case one would be more sure to guess (?) correctly, if he *knew* before guessing.—A. J. COOK.

Decidedly they will. But it depends somewhat upon the state of the weather at the time the honey is gathered. In the rainy year of 1882, the common milk-weed could be smelt and tasted plainly in the honey, so much so that I could not eat it. Also the smart-weed imparted its smell and taste to the honey. I am glad to say that such is not frequently the case.—G. W. DEMAREE.

Hive-Ventilation—Side-Open Sections.

Query, No. 314.—1. Is it a good plan to raise the hive ½-inch from the bottom-board in hot weather? Will it make any difference about storing surplus? How about preventing swarming? 2. Is it any advantage to have openings at the side of sections, so that bees may pass from one to the other without going below or above?—R. D. R.

1. It works well with me. I have done so for a good many years with the best of success. 2. I have not used any with side-opening.—H. D. CUTTING.

1. It worked well in my apiary, and makes no difference about the surplus crop, nor about the swarming, so far as I have been able to see. 2. Decidedly, no.—G. W. DEMAREE.

1. To the first part, yes, and more too. To the second part, not if the weather is very hot. It will help to prevent swarming, by making the bees more comfortable. 2. Yes.—DADANT & SON.

1. It depends upon the size of the entrance before raising. If too close it may hinder storing in very hot weather, and favor swarming. 2. I was prejudiced in favor, but a trial in 1885 showed no advantages.—C. C. MILLER.

1. I do not so raise them. An entrance ⅜x14 inches I consider ample room for all the requirements of the bees. 2. I do not use such, but I should judge that it might help some.—G. M. DOOLITTLE.

If the entrance is not large enough it would be a good plan. Shade and ventilation probably retard swarming. 2. I have never used such sections; and should not think there was any advantage in their use.—W. Z. HUTCHINSON.

I see no objection to it; neither do I see any great advantage in it if the hive is well shaded. It would make no difference in storing surplus. 2. I think there is some advantage in having openings on the side of sections.—J. P. H. BROWN.

1. I always desire to have ventilation enough to keep the strongest colonies active, even in the hotest weather. I do it by large openings to the hives. Improper ventilation, I think, might lead to swarming, and certainly enforces idleness. 2. I have never tried such sections. I should not suppose that they would be any better, though some praise them.—A. J. COOK.

1. I abandoned the practice. It did not prevent any tendency to swarm, neither did it give me more surplus. It compelled the bees to guard the hive from every side, and both they and I prefer *one* side.—JAMES HEDDON.

It is a good plan to give ample ventilation in hot weather. More surplus will be stored when ample ventilation is so given. It may or may not prevent swarming. 2. Sections should have such openings as will allow of free communication from one to another, and side-openings are necessary for this purpose.—J. E. POND, JR.

1. Raising the hive from the bottom-board has little to do with storing surplus or swarming. 2. My experience the past season with side-opening sections has been such that I shall hereafter use no other kind. They remove all objection to the use of separators, cause the sections to be filled out plump at the sides, and when reversed, plump all around. The corner and side sections of the case are also completed, and ready to take off almost as soon as the centre ones are. But the facility in using separators, the advantage to the bees, and the little propolis attached to sections or separators, would amply repay any one to use side-opening sections.—G. L. TINKER.

Moving Bees before Wintering.

Query, No. 315.—Will bees be as likely to winter well hauled 80 rods, as they would to be picked right up and carried a few rods and put into a cellar? I wish to take my bees to a neighbor's cellar.—Pa.

My experience says yes,—G. M. DOOLITTLE.

They will, if carefully handled.—J. P. H. BROWN.

It will make but little difference if you are careful. The less you can disturb them the better.—H. D. CUTTING.

If they are not jarred in handling, I think they will. A light spring wagon would answer nicely.—G. L. TINKER.

I do not see any reason why they should not, if care is taken to disturb them as little as possible when moving them.—J. E. POND, JR.

I should feel afraid of the hauling, although the difference in cellars might make up for the damage in hauling.—C. C. MILLER.

They will winter best where they are least disturbed when put in, but in a good season it may make no difference.—DADANT & SON.

It may make no difference, but I should prefer to have bees put into the cellar so quietly and carefully that they would not know they had been moved.—W. Z. HUTCHINSON.

Bees may be moved from place to place late in the fall or in early spring without sustaining any injury, so far as my experience goes.—G. W. DEMAREE.

Sometimes such shaking up does not and cannot do any harm, and again, with other kind of stores, it tends to engender bee-diarrhea, I believe, from careful observation.—JAMES HEDDON.

I think it would be just as well, though I should prefer to have them have a good flight after moving, before they are put into the cellar. I have known several times of bees being carried miles and put at once into a cellar, and yet winter well; still I should not recommend any such practice.—A. J. COOK.

Moving Bees by Wagon.

Query, No. 316.—1. I want to move 30 colonies of bees 75 miles on an ordinary farm wagon; how must I prepare both wagon and bees? 2. Are coil-springs for such wagons made? If so, where can they be obtained? I cannot ship by rail.—Texas.

Give the hives plenty of air—ventilation. Use a large, flat hay-rack, and put on about one-fourth of a load of hay, and then the bees on top of all, and rope them on secure. Drive carefully, and no springs are needed. Water them every five hours if they have brood in the combs.—JAMES HEDDON.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ☉ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⊸ northwest; ⊸ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Intestinal Accumulations of Bees.

C. W. DAYTON.

I have just returned from a wander down through the accumulation of ideas presented on page 567. I found (taking reports for truth) that while Mr. Heddon succeeded in preparing scores of colonies for winter without any nitrogenous food (pollen), Mr. Doolittle was unable to prepare even one colony for winter without some grains of pollen lurking about the combs. This might indicate that Mr. Heddon was a smarter man than Mr. Doolittle. But come to think about it Mr. Heddon's combs were not passed before the microscope as were Mr. Doolittle's, neither had the bees the diarrhea. On the same page we are informed that the testimony of an eye-witness over-weighs all other kinds of evidence; yet the writer does not inform us whether the evaporated excreta which Mr. Heddon scraped from the brood-frames could be so testified to, as being the excreta of a diseased bee or a healthy one.

Those who have read the bee-papers should recollect that the bees selected by Prof. Cook for examination were of the last in the colonies to die, and having the most turgid abdomens, and were not fair representatives of the colonies. The diarrhetic accumulations are spoken of as consisting almost entirely of undigested pollen-grains, when the majority of the cases finds it to be water with the pollen afloat, and in proportion as to ten to one.

We would be led to believe that a mixture of sugar and water in a fermenting condition could not from any cause pass the stomach of the bee and amount to an excessive abdominal accumulation; and a few insist that it would not be diarrhea, because it would not spot the snow.

I wish to be credited with the idea that the intestines of the bee may become loaded even to bursting, as were those Prof. Cook dissected, and yet not bear a trace of diarrhea, and I think my evidence that it is a function of health, will stand against evidence that it is diarrhea.

There are amongst us those who know diarrhea from healthy conditions, and who have seen diarrhea with and without the presence of pollen, and it is my candid belief that Prof. Cook can obtain diarrhetical bees for examination whose excreta or combs do not contain pollen.

On page 567 we read: "Colonies wintered without nitrogenous food have not a trace of diarrhea." I ask, have the colonies so wintered had their combs subjected to careful tests with the microscope as in the case of Mr. Doolittle's? as the writer repeats elsewhere in his article, that there was no pollen found in the intestines of the diarrhetic bees sent to Prof. Cook by Mr. Doolittle, but because there was a trace of pollen found on the comb sent by Mr. D., it (pollen) must have been the cause of the diarrhea. A frail argument. In the logic offered us we often find a grain of pollen comparable to the particle of musk that continues its perfume for thousands of years. At other times the cells may be half full pollen, with some sugar syrup covering it, and the colony is safe.

Again, I find on page 567: Bees with no pollen do not accumulate fecal matter. Many apiarists have known bees to contain accumulations of a transparent souring substance that emitted the diarrhetic odor and caused the soiling of the surroundings. I have received bees through the mail that were fed entirely on sugar that showed unmistakble symptoms of diarrhea, but the evacuations were transparent. Call it fecal matter, or any intestinal accumulation, the effect is the same, the disease is the same, and it is caused by the same, but different cases differ in the composition of the accumulations. An experience of never having lost a colony with diarrhea is a pretty small experience to place against one of hundreds of colonies; in fact I do not know as so small an experience would admit of good judgment as to what is good evidence for or against the pollen theory.

It is indeed strange that the accumulation may consist so largely of water, and the pollen folks cannot see it; and it is far stranger still (if the pollen theory be true) that a colony may consume pollen all winter and not have the disease! Yet such men as Prof. Cook and Mr. Heddon—men who do not have time to go into the cellar more than once or twice during a winter to observe the bees—should view the tracks and attest the cause of the disease with more certainty than the daily watcher of the bees. The discovery of the true cause of diarrhea ought to be worth a man's whole time and study for several years. I believe we are ready to admit that a colony with sugar stores is not so apt to have diarrhea as when it has honey and pollen, and also that searching the excreta for the cause should be as fruitless as to search the air we breathe for the cause of consumption.

Near the centre of page 567 it is said, "Diarrhea is due to the *accumulation* of fecal matter." The general understanding of the disease verifies that it is due to the *nature* of the accumulation, as the bees that soil their hives most, and appear the most uneasy are seldom the most distended. Bees that consume food containing a large proportion of refuse substance may accumulate much fecal matter in a comparatively dry state and of a solid nature. Bees of this kind, with abdomens ever so distended, do not evacuate until they fly in the open air. If the distention is more than they are able to bear until the flight, then they die outright. When the bees are badly afflicted with diarrhea, they do not even wait until there is an accumulation, but begin early to befoul the hive or combs.

Sometimes diarrhea may set in after there is a healthy accumulation of fecal matter, in which case the accumulation would not be diarrhea, or the diarrhea an accumulation. If the pollen folks are in favor of calling constipation diarrhea, I would advise them to embark and seek an appropriate name for the "baby," and leave the diarrhea to the rightful possessors. I think the most of the points given may be considered as "testimony of experience," and therefore I hope they will secure the confidence of the jury.

Bradford, ♂ Iowa.

For the American Bee Journal.

Ontario Bee-Keepers' Convention.

The annual meeting of the Ontario Bee-Keepers' Association has heretofore been always held sometime during the Toronto Industrial Exhibition. This year, the President and other leading members being away in England, and the association being in a sort of transition state, owing to its having been recently incorporated by Act of Parliament, it was thought better to defer the annual general meeting until a later date. But, as many bee-keepers are present at the Toronto Exhibition, and would be disappointed if the association did not assemble, it was decided to meet as usual, and occupy the time with appropriate bee-talk. Accordingly, on Tuesday evening, Sept. 14, 1886, a goodly number of bee-keepers met in the large committee-room of the City Hall. The meeting was called to order by the Secretary-Treasurer, Mr. W. Couse, and in the absence of the President and Vice-President, Rev. W. F. Clarke was appointed chairman. It was voted to dispense with the reading of the minutes—also to defer all routine business, and proceed at once to the discussion of practical matters.

The chairman congratulated the association on several felicitous circumstances. The good attendance, although several accustomed to take a leading part, were necessarily absent; also, the excellence of the honey show at the Exhibition, notwithstanding the drain made by 35 honey-producers having sent the best of their product to the Colonial and Indian Exhibition now being held in London, England. Though we regretted the absence of the President, Messrs. Jones, Corneil and Mc-

Knight, yet they were serving the interests of the association better where they are, than if they were present here. They were taking charge of a magnificent display of Canadian honey, which we had every reason to believe would open the eyes of John Bull to the fact, that here in this country we can produce just as good honey as can be gathered from the flora of Old England. The result would be, without doubt, the opening up of a large and permanent market for our product in Britain. As in the case of Canadian beef and cheese, so in regard to our honey, it had only to be known and tested to secure for it free access to the British market, and a wide sale there.

Most of all, the association was to be congratulated on having attained Government recognition and become a corporate body. It now takes its place beside the Fruit-Growers' and Dairymens' Associations, and like them, is henceforward to receive a Government grant. The present year $1,000 has been given, and this sum has been appropriated to making a show of Canadian honey in England. Results would no doubt prove that the money was well invested. It is anticipated that a regular grant of $500 per annum will be made, and this sum wisely expended, will greatly aid in the development of practical bee-keeping.

The act of incorporation makes certain requirements, and it might be well to consider what steps, if any, should be taken at this meeting to conform thereto. On motion, it was resolved to lay this matter over for farther consideration until the next evening. The convention then proceeded to consider the subject of fall feeding, with a special reference to the question of sugar-feeding. This point was fully discussed, and proved of sufficient interest to occupy the remainder of the evening. As the outcome of the discussion, it was

Resolved, That it is desirable to take every precaution that the bees have sufficient natural stores, and that a number of combs be set aside to supply any shortage; that, failing that pure extracted honey be fed; and that, as the very last resort, sugar syrup be fed for wintering.

The chairman requested that all questions to be answered, and all essays to be presented be in the hands of the Secretary at the opening of next evening's session. The meeting then adjourned to 7:30 the next evening, at the same place.

SECOND EVENING.

The convention resumed on Wednesday evening, with the acting President, Rev. W. F. Clarke in the chair. An essay from Mr. Allen Pringle, of Selby, Ont., the Vice-President, was read. It detailed his experience during the present season, from which it appeared that the yield had been moderately good. Two points of great importance in the fall and winter management of bees were urged, plenty of stores, and a young, fertile queen. The temperature which most conduces to quiescence of the bees is the best temperature, whether it be 45°, 50°, or 55°. It will range somewhere between those figures, depending upon the hive ventilation, quilt-protection, humidity, etc. For hive ventilation, very free lower ventilation was recommended, with warm quilts of wool on top. On motion, thanks were presented to Mr. Pringle for his interesting paper.

A number wished to know how to ascertain if a colony had a young, fertile queen. The reply was, by inspecting the brood-chamber. If brood was found in fair quantity, it might be inferred that the queen was all right.

ALSIKE CLOVER.

The question was asked, what were the advantages of Alsike clover as a honey-plant. The President, by request, replied briefly: Alsike will grow in damp, moist places where the other clovers die out. It is a more abundant source of honey than white clover. One of our chief honey-producers this year has no crop, and one main reason is the absence of Alsike where formerly it was abundant. The chief advantage of Alsike, however, is that it is of great value to the farmer as a forage crop, as well as to the bee-keeper for honey.

FOUL BROOD.

A Toronto bee-keeper complained that foul brood was rife in one or two apiaries near him. He was certain of its presence in one, and had every reason to believe that it prevailed in a second. He thought steps should be taken to prevent the spread of this disease. It was also stated that there were some cases known to exist in Centre Wellington, and other parts of the Province. The President, on being asked to do so, explained the nature, symptoms, and appearance of this disease. He also urged the importance of every possible precaution being taken to suppress it. After a full discussion, it was, on motion

Resolved, That at the next annual meeting, the advisability of procuring legislative action for the supression of foul brood be considered, and that this convention is of the opinion that active steps are necessary for the suppression of this disease.

The President stated that during the day he had looked up the statute incorporating the association; also that he had called on the Commissioner of Agriculture to ascertain what action we need to take to bring ourselves into line with the Act; and that as the result of his inquiries he found there were certain steps to be taken, which he proceeded to specify. After some discussion, the following resolutions were passed:

Resolved, That as the Constitution of this Association requires that the time and place of the annual general meeting shall be fixed by open vote of the association, Toronto, and Dec. 7 and 8, 1886, be selected as the time and place of the annual general meeting for the current year.

Resolved, That the present membership and official appointments hold good until then.

Resolved, That the executive committee be instructed to prepare such amendments to the constitution and by-laws as may be necessary to conform to the Act of Incorporation.

Resolved, That the Secretary at once make the sworn return of the number of members and paid subscriptions required by the Act of Incorporation.

After some informal talk and sundry votes of thanks, it was

Resolved, That the association do now adjourn until Dec. 7, 1886.

W. Couse, *Sec.*

For the American Bee Journal

The Yucca or Spanish Bayonet.

W. W. BLISS.

This is one of California's most beautiful wild flowers. In their wild state they seldom attain the height of more than 8 to 12 feet. In the summer of 1884 one bloomed in Pasadena that attained the height of 25 feet or more. This one was transplanted from the mountains to an orange orchard some 8 or 9 years ago. The shaft or flower-stalk is the growth of but a few weeks; and as it stood with its top completely covered with creamy-white flowers, it was a sight that is seldom seen.

This species of the yucca (*Yucca baccata*) dies after it blooms; it is then that it is of special use to the bee-keeper. The broad heavy leaves that grow around the stalk near the ground are gathered and dried; when combed out, they make a nice brush, which is superior to anything for brushing the bees off the combs in extracting. They are a soft vegetable fiber, from 3 to 4 inches wide, almost indestructable, and never known to come loose in the handle; besides, they can be sold at a price within the reach of every one.

Duarte, ♀ Calif.

For the American Bee Journal.

The Poetry of Bee-Keeping.

JAMES HEDDON.

The past season has been for me the buisest of my life. Five hundred colonies of bees, a business larger than ever, students to instruct, a large and varied correspondence, increased and interesting experiments and inventions, have all contributed to over-work, yet have made life seem of more importance, and better worth living. I offer the foregoing facts as an excuse for my delay in expressing my thoughts upon reading Rev. W. F. Clarke's little poetical work, devoted to our chosen pursuit, and recently presented to the public.

Although I had the honor of reading it in manuscript and proof, it was not until this week that I could command the time to read it in its complete, corrected, book form. As is stated on the cover, the reading is "lively," "entertaining," "practical"

—aye, and more, it is spicy and replete with wit and wisdom. But this is not all; Mr. Clarke's "Bird's-Eye View of Bee-Keeping" is not only terse, plain, vigorous, and pointed, but being all in rhyme, it makes the strongest impression upon the reader in the fewest possible lines. In the preface the author asks if the poetry has all gone out of bee-keeping. Allow me to answer that question by asking how poetry could desert a pursuit so beautifully and closely connected with nature, that is

"In every charm supreme!
Whose votaries feast on raptures ever new.
O for the voice and fire of seraphine,
To sing the glories with devotion due!
Blest be the day I 'scaped the wrangling crew,
From Pyrrho's maze, and Epicurus' sty;
And held high converse with the god-like few,
Who to th' enraptured heart, and ear, and eye,
Teach Beauty, Virtue, Truth, Love and Melody."

Is there not always as much poetry in the works of nature as the observer is capable of receiving from it? In other words, is not the poetry in the brain that looks upon the scene? Next to field sports I have found bee-keeping best calculated to arouse the poetic sentiment within. Who can stroll over the fields during this month, watching

"The pollen-dusted bees
Search for the honey-less
That linger in the last flowers of September,
While plaintive mourning doves
Coo sadly to their loves,
Of the dead summer they so well remember,"

without a heartfelt gladness that the poetic sentiment is in the world, and that he has received a share.

Mr. Clarke has well claimed that in apiultural literature there is room, yes, a demand for thoughts delivered in rhyme, for is it not true that

"Sages and chiefs long since had birth,
Ere Cæsar was, or Newton named;
These raised new Empires o'er the earth,
And those, new Heavens and systems framed;
Vain was the chiefs, the sages' pride!
They had no poet, and they died.
In vain they schemed, in vain they bled!
They had no poet, and are dead!"

I consider the book uncommonly instructive and correct in its teachings, considering its brevity and that it is written for beginners.

Without attempting to eulogize all of the many well-put assertions that I consider correct, nor criticize the few that do not agree with my experience, I will not pass without merely mentioning my pleasure at noting Mr. Clarke's truisms, wherein he states that beginners should seek a location clear of other bees; should not expect to get rich in a minute; and should not urge every one to embark in bee-keeping. I endorse what he says about the treatment of angry bees, and scores of other things too numerous to mention here.

I cannot agree with him about the fitness of bee-keeping for ladies; I fear his great gallantry has led him astray. We do not agree on hibernation yet, and I think few will agree with his statement (on page 15 of his book) that hybrid bees show greater tendency to swarm than pure Italians. The German bees, from whence came the cross, are, I believe, conceeded to be the most non-swarming race.

I cannot agree with him on page 20, that any honey-producer should wear gloves of any kind. I believe such would be left far behind in the race. I know of no more appropriate place to apply the old adage, that "Cats with gloves on catch no mice." I would hardly want queens reared in the manner mentioned on page 29; yet this may be only a matter of prejudice. We all know that Mr. Clarke

"Sometimes raises scruples dark and nice,
And after, solves 'em in a trice;
Like one who purposely had 'catched'
The itch, in order to be scratched."

On page 10 he speaks about arbitary prohibition of persons keeping a few bees, as though this prohibition was of man's rather than nature's law. That the specialist can produce honey at a price that the dabbler cannot, is a law of nature that no one can change.

Taken all in all, looked at from my stand-point, I find, as compared with other books, very little to criticize as compared with the much to commend. I have placed the little work in my apicultural library, with a feeling of pride and satisfaction, and it is with perfect assurance that I say that it is worth many times more than the 25 cents asked for it, to any bee-keeper, as well as to many that never expect to keep a bee.

"Call it not vain—they do not err
Who say that when the Poet dies,
Mute Nature mourns her whisperer,
And celebrates his obsequies."

And now in closing this hasty review of another valuable addition to apicultural literature, I think I am warranted in saying, in behalf of our fraternity, that

We can but think, our faithful friend,
The end
Of life will find you leal, unweary
Of tested bonds that naught can rend,
And e'en if years be sad and dreary,
Our plighted friendship will extend!

Dowagiac, ♀ Mich.

For the American Bee Journal.

Foul Brood—A Real Bee-Malady.

T. F. BINGHAM.

That "moss covered" saying, "Nothing new under the sun," may now with æsthetic propriety be laid on the dusty shelf of the past. The disease may have been an old one, though Prof. Cook intimates that it is a matter of doubt whether Aristotle knew anything about it. To us it is not of importance whether Aristotle recognized the odor of the decaying larvæ or undigested pollen as symptoms of disease of specific types.

On page 584 is a concise and careful description of the process of cure and presumed prevention of foul brood; the condition and phases of the much dreaded disorder, as it existed in the apiaries treated by the process described.

It will be noticed that while all the older writers on bee-diseases have regarded foul brood as its name implies, viz: a disease of the brood, and not of the older and mature bees; while the article above referred to avers that "bees crawled out of the hives to die by tens of thousands—effect of treatment apparent in one day." There can be no misunderstanding that sentence. The disease killed the old bees, and the dope cured the old bees the same day.

It is of importance to bee-keepers that we have just such descriptions of an malady which may even in a single apiary occur. Theories admit of discussion, and frequently do much to fill bee-papers with debatable matter, but facts clearly set forth, as are those of Mr. McLain, shed light in dark places.

Foul brood, or the dying of partially mature bees in their cells, appears to be a very common occurrence in apiaries, and it seems also to be of such a nature, either from its character or from the influence of what has been written about it upon the nervous systems of various bee-keepers and writers of bee-literature, that either from its real enmity to bee-culture, or the superstition with which it has been regarded, that it is a real malady, and one of great moment.

While Mr. McLain's experience may have inadvertantly cast a florid hue over the dreaded—but as now appears not well named disorder—we shall all welcome as new and substantiative the facts he has so clearly given, demonstrating that combs and hives have been renovated in an easily practicable manner. While the fact seems so plausible, it *behooves every bee-keeper* to remember that "eternal vigilence is the price" of success as well as liberty, and that too much care cannot be given that diseased brood does not spend in his own apiary and to those around him.

Abronia, ♀ Mich.

For the American Bee Journal.

Is Pollen Necessary for Bees in Winter?

SAMUEL CUSHMAN.

It would be hard to better the remarks made by Rev. W. F. Clarke (page 810 of Vol. 21 of the AMERICAN BEE JOURNAL), in regard to Prof. Cook's essay on the "Pollen Theory," read at the Detroit Convention. They were, that "The pollen theory had got its quietus from Prof. Cook. He has memtioned that bees cannot breed without taking nitrogenous food. If they take that food it must be digested and the feces excreted. Well, Mr. Barber and Mr. Hall have proved that bees breed largely, *i. e.*, work hard, and therefore must eat and digest strong food. The inference is plain. The bees if they excrete do it in dry feces. They must excrete; that is clear; therefore, there is no danger in having pollen in the hive. On the contrary it is necessary."

The Professor's essay (page 25 of the BEE JOURNAL for 1886) is one of the best articles against the theory that I have seen, and it seems to me that bee-keepers who read it must realize (in spite of the Professor's conclusions) what a serious matter it would be to deprive the bees of their pollen. The fact that the bees which were deprived of pollen died without showing that kind of diarrhea does not prove that bees winter better without it. It only shows that bees dying without it in their hive did not have any in their excreta or intestines. I fail to see anything favorable to the theory in this. Why did they not live? If they died without pollen, how much better off were they than if they had it, and had died showing diarrhea. It would look as though they were killed by cold in each case. Cold caused such a depression of function that food eaten was not digested, or possibly caused such excessive exertion to keep warm as to prevent digestion, result death from lack of nutrition. Suppose the bees both with and without pollen, had not been exposed long enough to kill them; warm weather gave them a let up for several days, they were exhausted (in each case) from exertion and lack of nutrition. Which colonies have the best chance to repair the waste of nerve and muscle, those with pollen or those without?

Those without have only the supply contained in their bodies, which has been largely drawn upon; they will have to wait until spring, if they live until then, before they can get materials for repair, while the others can supply their needs at once. You may say, if they were not exposed to such excessive cold, they would not need repairs, neither would they have diarrhea, or eat more pollen than they could digest. We are shown that pollen does no harm, if the temperature is right, and that quantities of brood are reared before their spring flight.

Animals that hibernate store their carbonaceous or heat-giving, as well as the nitrogenous elements in their bodies, enough to last all winter. Bees store both in combs, and have we any more reason to think that they have in their bodies a sufficient supply for winter of one and not the other of these elements.

Man or animals require for food carbon, nitrogen and mineral salts in certain proportions. Different seasons and circumstances require different proportions, but neither of these elements should be entirely lacking. I do not doubt that under certain very favorable conditions bees may be brought through the winter alive with absolutely no pollen, but in my opinion, with the same conditions, they would be much better off with it.

Possibly there may be times and locations when a hive might contain too *much* pollen, not giving enough honey room in some combs, and if cold confined the cluster to these combs, the result would be disasterous; but in such a case, with enough honey in the hive to support them, and with proper temperature maintained, no trouble would occur. Bees will not eat it to harm them unless in an unnatural condition. Shall we not regulate the temperature instead of depriving them of a necessary food, because they eat excessively of that food when in an unnatural condition from lowered temperature. Then when they choose to rear brood they have the means to do so.

Although this theory has been advocated and supported by a few such prominent apiarists and writers as Prof. Cook, Prof. Hasbrouk, James Heddon and others, it does not seem to meet with favor from the majority of bee-keepers. Our heaviest and most successful producers continue to leave a liberal supply of pollen in the hives for winter.

In the Professor's essay we are told that nitrogen may be changed or transformed into fat. Does he mean to tell us that by a vital process nitrogen may be chemically changed in the body into fat? He gives fatty degeneration of the heart as an example. I have always supposed that in this case the nitrogen was replaced by fat, that the muscle was wasted by use and slow oxidization, and through faulty nutrition was not removed, but fat being abundant in the blood, was deposited instead of the proper material. Here is another chance for our medical readers to enlighten us, and I hope they will.

Prof. Cook has rectified the impression given as to the amount of air required by bees, and I hope we shall yet be informed that it is not advisable to remove the pollen from the hives, that everything considered bees stand a better chance with than without it, that fermented or thin honey may also cause diarrhea, that a low temperature is harmful, pollen or no pollen, that the point to be considered is temperature and pure air, and how to keep it right.

Whether Mr. Heddon has been of benefit or not to our industry in advocating this theory, there is no question in my mind but that he has done great good and deserves much credit for perfecting and so strikingly bringing to our notice an improved system of hive manipulation, which, it seems to me, all progressive bee-keepers must appreciate. I do not refer to the reversing or inverting feature, but to the interchanging of shallow brood-frames in cases, and the manipulation of cases instead of frames.

Pawtucket, R. I.

For the American Bee Journal.

Bees and Honey at Michigan State Fair.

H. D. CUTTING.

The Michigan State Fair opened on Sept. 13, with ten exhibitors in the bee and honey department. A. D. D. Wood, of Rives Junction, had a large exhibit of one-piece sections, comb-foundation mills, honey-extractor, comb foundation, extracted honey in tin pails, 2 colonies, and several other articles. W. D. Higdon, of Jackson, exhibited several cases of comb honey, 2 colonies, beeswax, smokers, honey-knife, queen-cages, and a case of bee-literature. O. A. Quick, of Leonia, showed comb and extracted honey, implements, case of sections, etc.

Mr. Shelby, of Jackson, exhibited 10 pounds of extra fine beeswax; W. D. Soper, of Jackson, a section-case; W. Z. Hutchinson and brother Elmer, a large lot of comb honey in shipping-cases (14 sections to the case), extracted honey in Muth jars, honey-bearing plants mounted (about 80 in all), several different hives, honey-extractor, a good line of implements, 8 colonies of bees, case of bee-literature, beeswax, etc.

The writer exhibited comb and extracted honey, a large collection of implements consisting of 226 different articles, 3 colonies of bees, case of bee-literature, foundation mills, extractors, honey-bearing plants (170 in number), bees-wax, sections, foundation, bee-hives, smokers, knives, etc.

The Agricultural College exhibit, in charge of Mr. Gillette, consisted of a large and very fine collection of honey-bearing plants, samples of the different varieties of honey, and a colony of bees. Prof. Cook "hit the nail on the head" when he sent his able assistant, Mr. Gillette, to represent the College in this department. Every day at 2 p.m. Mr. Gillette placed a bee-tent over the colony of bees, opened the hive and showed to the large crowd of visitors "just how to do it." His lecture was very instructive and intertaining. Mr. Gillette will long be remembered for his gentlemanly courtesy by the many visitors and exhibitors.

Miss Anna Cutting showed a case of comb honey. Two ladies exhibited honey-plants in bloom, but I cannot recall their names; also one exhibit of a case of comb honey.

Dr. A. B. Mason, of Wagon Works, Ohio, presided as judge of the exhibit, with his usual good nature. He brought and placed on exhibition a piece of granulated honey 10x10x12 inches, as white as coffee C sugar, hard and dry. It was admired by many visitors. On the last day of the Fair one exhibitor sold over 100 packages of extracted honey, and to a careful observer you could see that the greater portion went to persons that were not accustomed to eating honey. This is one of the best places to make consumers of honey, if you give them a first-class article. We find many persons prejudiced against extracted honey, but when they persist in calling it "strained" honey do not appear vexed, but explain to them that it is not strained, but extracted honey, and show them just how it was done, and in this way you help to educate the masses in the use of nature's purest sweet—honey.

We missed Mr. R. L. Taylor as an exhibitor this year, but he came and made a two days' visit. The State Agricultural Society are well pleased with our efforts to make a success of this department. The premium list is large ($300), and now all we want is more exhibitors. We should have at least twenty every year. The greater the exhibits the more interest will be taken. Several that are not in the habit of making exhibits have promised to be on hand next year and make it interesting.

Clinton, Mich.

North American Bee-Keepers' Society.

FRANK L. DOUGHERTY.

The North American Bee-Keepers' Society will hold its 17th annual convention Oct. 12, 13 and 14, 1886, at Indianapolis, Ind. The meeting will be held in Ptofflin's Music Hall, 82 and 84 North Pennsylvania Street, one of the most pleasantly situated halls in the city, having good ventilation and plenty of light. The Society head-quarters will be at the Occidental Hotel, corner of Washington and Illinois Streets. The regular rates of this hotel are $3 per day; special rates for those in attendance at the convention, $1.50 per day.

The Northwestern Bee-Keepers' Society, the Indiana State Society, the Eastern Indiana, with various county and joint societies will meet in union with the North American, making it one of the most important meetings of bee-keepers ever held in the country.

Every thing possible will be done to make the meeting pleasant and entertaining. An earnest, cordial invitation is extended. Following is the programme:

FIRST DAY—TUESDAY.

Forenoon Session, 10 a.m.—Convention called to order. Address of welcome, by Gov. I. P. Gray; "Response" by the President, H. D. Cutting; "Welcome to the City," by Mayor Caleb S. Denny; "Thanks," Dr. C. C. Miller, President of the Northwestern Society. Calling the roll of members of last year. Payment of annual dues. Reception of new members and distribution of badges; reports of Secretary and Treasurer. Announcements.

Afternoon Session, 2 p.m., Special Business.—Annual address of the President; "Bee-Studies," Prof. A. J. Cook, Agricultural College, Mich.; "Apicultural Journalism," John Aspinwall, Barrytown, N. Y.; "Bee-Literature," Thomas G. Newman, Chicago, Ills.; "The Coming Bee—What encouragement have we to work for its advent?" R. L. Taylor, Lapeer, Mich. Subject for discussion, has "Apis Americana" been reached?

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions that may have accumulated during the day.

SECOND DAY—WEDNESDAY.

Morning Session, 9 a.m.—Announcements. Communication. Call of the Northwestern Society to elect officers. Election of officers of the Indiana State Society. Call to order. "Rendering Comb into Beeswax," C. P. Dadant, Hamilton, Ills.; "Foul Brood," A. J. King, New York. "North American Bee-Keepers' Society—Past, Present and Future," Rev. W. F. Clarke, Guelph, Ont. Selection of place for holding meeting in 1887. Election of officers.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. "Bee-Keeping and Apiculture," Prof. N.W. McLain, U. S. Apicultural Station, Aurora, Ills.; "Feeding Bees for Winter," Jas. McNeill, Hudson, N. Y.; "Wintering Bees," Dr. J. B. Mason, Wagon Works, Ohio; "Solid Truths relative to the Apicultural Interests of the east coast of Volusia county, Florida," by John Detwiler, New Smyrna, Fla. Subjects for discussion, "Is the use of Foundation Necessary in Modern Bee-Culture?" "Are Perforated Honey-Boards a Success?" Unassigned essays.

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions in question-box. Social communications.

THIRD DAY—THURSDAY.

Morning Session, 9 a.m.—Announcements. Miscellaneous business. Communications. "The National Bee-Keepers' Union," by Thomas G. Newman, Chicago, Illinois. "A Talk on Hives," by James Heddon, Dowagiac, Mich.; "Reversible Hives and Frames," J. E. Pond, Jr., Foxboro, Mass.; "Drones and Drone Comb," W. Z. Hutchinson, Rogersville, Mich.; Reports of Vice-Presidents; "Progress of Bee-Keeping in Indiana," Jonas Scholl, Lyons Station, Ind. "The Future of Bee-Culture," G. W. Demaree, Christiansburg, Kentucky.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. Explanation of various articles on exhibition.

Indianapolis, Ind.

Local Convention Directory.

1886. *Time and place of Meeting.*

Oct. 6, 7.—Kentucky State, at Frankfort, Ky.
Jno. T. Connley, Sec., Napoleon, Ky.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 16.—Sheboygan Co., at Sheboygan Falls, Wis.
Mrs. H. Hills, Sec., Sheboygan Falls, Wis.

Oct. 16.—Western Iowa, at Stuart, Iowa.
J. E. Pryor, Sec.

Oct. 19.—Central Mich., at Lansing, Mich.
J. Ashworth, Pres.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Oct. 21.—Southern Illinois, at Benton, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bees Carrying in Honey and Pollen.—J. W. Sanders, LeGrand,⊙Iowa, on Sept. 23, 1886, writes:

Our great drouth is over, and the pastures and roadsides have changed from a dark brown to a bright green, which makes it look as though spring had just set in. The thermometer, yesterday, indicated 92° in the shade, and to-day it is near 90°. Bees seem to be on a boom, and are carrying in both honey and pollen, We have had no frost yet to hurt the fall flowers. The white clover begins to look as though it was getting ready for another bloom; some heads already appearing. Cool weather may soon put a check to its rapid growth. There is but little fall honey yet.

Plain Sheets of Wax, etc.—J. G. Norton, Macomb,+o Ills., on Sept. 15, 1886, writes:

The season of 1886 has about closed, and I can say that it has been a very good one for honey. I have disposed of nearly all my crop at 10 cents a pound on cars here, 12½ cents being the highest price at retail that can be obtained, as our market has been destroyed by a few that have been trying to keep bees here within the last four years. Our County Fair was held last week, and was a success. The display of bees, bee-hives, and honey was good, and admired by crowds of people. I succeded in winning all the first premiums on bees, bee-hives and combs, and extracted honey, and I am well satisfied for the time and trouble taken. I think it an excellent way to advertise. In regard to using plain sheets of wax in bee-hives, I consider it a foolish practice. I have kept bees for 15 years, and have made many experiments, and know positively that bees do not build drone comb on worker foundation; neither do they in any instance change worker comb to drone comb, or *vice versa*. So if Mr. J. F. Hays will experiment again he will find his mistake. Old or inferior queens or laying workers lay eggs in worker combs, and these eggs hatch drones, but the size of the base of the cell is always the same, and cannot be changed. No system has yet been found to guarantee all-worker comb every time without the use of full sheets of foundation; and in my opinion, if it does not pay to use full sheets of foundation, it does not pay to keep bees. Bees will go into winter quarters in good condition this year, but the fall crop of honey will be very light, as not any surplus has been stored yet, and we can now expect frost on any night.

No Basswood Honey.—Will B. Robinson, Upper Jay,δ N. Y., on Sept. 13, 1886, writes:

Basswood was an entire failure in this section, but I obtained 275 pounds of comb honey from 8 colonies, spring count. I purchased an Italian queen, which I successfully introduced on Sept. 1. I opened the hive a few days later, and saw plenty of eggs and larvæ. This is my first attempt at introducing queens. I also built up a colony with the black queen. In intend to Italianize my apiary in the spring. I think that I owe to the Bee Journal all I know about bees.

Report.—Preston Taylor, Roodhouse,+o Ills., on Sept. 9, 1886, says:

I began in the spring with 14 colonies, increased them to 33, and have extracted 1,900 pounds of honey. My bees seem to be in good condition at the present time.

Italianizing Colonies.—J.L.Dewey, Sealy,⌒ Texas, writes:

The following is my plan of finding the native queen, for the purpose of Italianizing, and would like any suggestions if it can be improved upon to expedite matters: I first prepare a new hive with comb foundation, and an Italian queen caged within. Remove the old hive and bees, placing the prepared new hive on the old stand. I then drive all, queen among them, into a swarming-box with a slide door on one side and perforated zinc on the other side, darkened with a sheet of plain zinc, to remove at pleasure. After all are in I slide out the sheet of plain zinc, and a few puffs of smoke make the bees get out of the hiving-box with a rush, and fly back to their supposed old home, to find a new outfit for house-keeping, and a well-charged feeder, at their pleasure; and all go to work as if there had been no change. Poor Mrs. Native Queen is found in the box *alone*, and *no hunting*. Who will improve on my plan?

Manilla Paper for Hives.—Albert Neuman, Rolla,⊙ Mo., writes:

I am making a double-walled beehive out of manilla paper. This I think will prove to be a first-class hive in every respect; a perfect non-conductor, strong, cheap, and a complete double-story hive, and only weighs 40 pounds. The material consists of 6 feet of ½-inch lumber, in 2-inch wide strips; 50 plaster laths, 32 feet of manilla paper for inside and outside walls, about 3 cents worth of ¾-inch wire nails, 24 2-inch nails, and 1 pint of paint, for a two-story hive; 10 frames in the brood-chamber 12½x12½ inches, outside measure. I would not have said anything about this hive until I had wintered my bees in it, but I did not wish any one to get hold of it and have it patented, for I desire this hive, if it proves to be as good as I think it will be, to be the property of the bee-keepers of this country. In the future I will describe how I make my skeleton as a foundation for the paper. Anybody that can handle a saw, hammer and square, can make it.

Was it Copied?—Chas. Dadant & Son, Hamilton,⊸ Ills., writes:

We were very much astonished, in perusing the BEE JOURNAL lately, to see that one of our leading writers, who has the reputation of an intelligent apiarist, has written an article on bee-culture partly *copied* from one of the leading bee-books, without any reference to the original. This is commonly called *plagiarism*. To make matters plain, and give "honor to whom honor is due," we refer the readers to page 471, and ask them to compare the last half of the middle column with the different paragraphs on pages 85, 86 and 87 of "Langstroth on the Honey-Bee," fourth edition.

[Desiring to do no injustice, we sent the above to Mr. Hutchinson, so that we may present his answer with it, and here it is.—ED.]

Yes, Bro. D., not only the portion of the article to which you refer was copied from Father Langstroth's work, but several other portions were copied from *other* works. The article, when written, which was nearly four years ago, was not intended for publication, but for reading at a horticultural meeting. After its reading it occurred to me to send it to the *Country Gentleman*, which I did, and it was published four years ago the coming winter. In the original manuscript, quotation marks were used to indicate the extracts, but the printers in the office of the *Country Gentleman*, by an oversight, or from some reason, omitted nearly all of them. I might say that I have a habit of making my quotation marks very small and light. I did not think very much about it when preparing the address, but now I know that it would have been better to have given *full* credit, instead of simply using quotation marks. Bro. D. has my best thanks for taking me to task, as I shall try and profit by the lesson. I cannot close without also expressing my pleasure at the honorable manner in which he has brought up this matter, thereby allowing me to publicly make the *amende honorable*.—W. Z. HUTCHINSON, Rogersville, Mich.

Uniting Colonies.—E. K. Dean, of Amenia Union,⟜ N. Y., writes as follows:

I formed a nucleus recently and gave it a valuable queen, which I had just bought, placing it close alongside of a large colony whose queen I wished to supersede, and intending to unite them when everything was favorable. A few days since, when the new queen had gotten well settled in her new home, and the nucleus was getting moderately strong, the colony sent out a large "buckwheat swarm," and now I thought was the time to unite them, so I watched the cluster till I discovered the queen, and destroyed her. Then I went immediately to the hives, and after smoking well, began by shaking every comb at the entrance of the hive of the colony which had swarmed, and put all the combs outside on the ground, except the one with the queen which I left until the last. About this time the swarm discovering the loss of their queen, came rushing back, and I quietly lifted the queen from the remaining comb and let her run in at the entrance, and then afterward shook the bees off in front of the hive. I tried to get a general mixing up by allowing two or three combs to get loaded three or four times, and shake them off again before I liberated the queen. I had no sooner got everything nicely closed up, however, before a general onslaught began, which was kept up, I think, till they annihilated the nucleus, and they were so fierce that they would drag out and *murder* freshly hatched bees, which, when I released and gave to other colonies, were allowed undisturbed admission. I feared the queen would share the same fate, but I found her all right a day or two since, and just beginning to lay again. She did not begin laying for several days. Queries: 1. In uniting what did I do, or leave undone, which should have been otherwise? 2. Do you think the value of the queen was impaired by the operation?

[You incurred a double and needless risk of losing your valuable queen by introducing her twice to strange bees. Usually this slaughter among the workers will not take place under such circumstances, but the queen is the most likely to be killed. I presume they have *now* killed her, because of your opening the hive to see how she was received. I once had such a case of slaughter, and all my uniting and scenting the bees proved to be of no use. I think your queen is all right if now alive.—JAMES HEDDON.]

* * *

Convention Notices.

☞ The annual meeting of the Kentucky State Bee-Keepers' Association will be held at Frankfort, Ky., on Oct. 6 and 7, 1886. All interested in bee-culture are earnestly requested to attend and help to make this meeting a pleasant and profitable one. The State Centennial will be celebrated at Frankfort, on Oct. 7, and excursion rates can be obtained on all railroads. A large attendance of bee-keepers is solicited. JNO. T. CONNLEY, *Sec.*

☞ The St. Joseph, Mo., Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.
E. T. ABBOTT, *Sec.*

☞ The Sheboygan County Bee-Keepers' Association will meet at Chandler's Hall, at Sheboygan Falls, Wis., on Saturday, Oct. 16, 1886, at 10 a.m.
MRS. H. HILLS, *Sec.*

☞ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. BALDWIN. *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The southern Illinois Bee-Keepers' Association will hold its next meeting at Benton, Ills., on Thursday, Oct. 21, 1886. F. H. KENNEDY, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet at Stuart, Iowa, on Saturday, Oct. 16, 1886. All interested in the busy bee are requested to be present. J. E. PRYOR. *Sec.*

☞ The Semi-Annual meeting of the Central Michigan Bee-Keepers' Association will convene in Pioneer Hall, in the Capitol Building, Lansing, the third Tuesday of October, at 10 o'clock, a.m.
J. ASHWORTH, *Pres.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, *Sec.*

☞ All are respectfully invited to attend the next meeting of the Bee-Keepers' Association of Eureka Springs, which will be held at Eureka Springs, Ark., on Oct. 23, 1886. Business of importance to every bee-keeper Northwest Arkansas will be before the meeting.
DR. S. S. PURCELL, *Sec.*

* * *

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

North American Bee Keepers' Society

The Chicago, St. Louis & Pittsburgh Railroad ("PAN-HANDLE ROUTE") take pleasure in hereby announcing to all delegates and their families desiring to attend the National Convention of Bee-Keepers' Union to be held at Indianapolis, Oct. 12, 13, and 14, that we have arranged to sell tickets to Indianapolis and return at $7.30 each on certificate signed by Mr. Thomas G. Newman, General Manager Bee-Keepers' Union.

Tickets good going Oct. 11, and returning up to and including Oct. 16.

Morning trains leave Chicago, from the Union Depot, at 8:30, reaching Indianapolis at 3:50 p.m. Evening train leaves at 8:30. Night train has through sleeping-car, and day train has through parlor-car to Indianapolis.

We can offer you superior accommodations and would be pleased to receive your patronage.

Tickets will be on sale in exchange for certificate at Union Passenger Station, corner of Canal and Madison Streets, Chicago, also at 65 Clark Street, corner of Randolph Street.

◆

The Monon Route to Indianapolis.

The Monon Route is the short line between Chicago and Indianapolis, and those desiring to attend the National Bee-Keepers' Convention, Oct. 12-14, should bear this in mind. The morning train leaves from the Dearborn Station at 8:35, arriving at Indianapolis 3:45 p.m. Evening train leaves at 7 30 p.m., and has attached elegant Pullman sleepers. Tickets good going Monday, Oct. 11 and returning up to and including Saturday, Oct. 16, will be on sale at Dearborn Station, corner of Fourth Avenue and Polk Streets, also at the city ticket office, 73 South Clark Street. For further information call or address E. O. McCormick, G. N. P. A., 73 South Clark Street, Chicago, Ills.

◆

Frank Leslie's Popular Monthly for October opens with a most interesting article, "The Tragic Close of a Strange Reign," the story of Louis II. of Bavaria well told and illustrated. The charming "Walks about London" capitally illustrated, is as good as an actual visit to the vicinity of the great capital of England, while "Summer Saunterings about Lake George" makes us feel that we have in our land all that is grand and romantic and interesting. Altogether the number is one that, in variety of topics, charm of writing and fineness of illustration, is unmistakably a hit. The plate, in gold and colors, is exquisite.

◆

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

Honey and Beeswax Market.

The following are the very latest quotations for honey and beeswax we have received:

CHICAGO.

HONEY.—For comb honey, we quote 12@13c. Extracted 6@7c.

BEESWAX.—23c. R. A. BURNETT,
161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 8½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.
MCCAUL & HILDRETH BROS.,
34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.
BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Owing to more liberal arrivals the market for honey is lower. Best in 1-lb. sections, 12½13c.

BEESWAX.—23c.
M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—Extracted honey brings 3 1-2 @ 7c.; comb honey, 12 to 14c. for good to choice, in the jobbing way.

BEESWAX.—It is in good demand and arrivals are fair. We pay 20c. for good yellow.
C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.
A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is good for all grades, and sales are large, while the supply is the same. Prices remain the same. One-pound sections, white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 9@10c.; ½-lbs, light, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5@5½c.

BEESWAX.—20@22c.
CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—We quote as follows: Choice comb in 1-lb. sections, 12@13; 2-lbs., 11@12½ cents; dark not wanted. Extracted, white, in kegs, 6@6½c.; same in tin cans, 6 1-2@7c.; dark in barrels and half-barrels, 5@5 1-2 cts.

BEESWAX.—No demand.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—We now quote 7@10c., as to quality wholesale

BEESWAX.—It is dull, but buyers have to pay 22@23c. for choice lots.
SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Receipts are light and the market is very quiet. We quote: White extracted, 4@4¼c.; amber, 3¾c. Comb, 8½@10c. for white.

BEESWAX.—19@22c.
O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Firm at 22c for prime.
D. G. TUTT & CO., Commercial St.

◆

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers before Jan. 1, 1887.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

Advertisements.

WANTED—A Swiss Bee-Keeper desires to obtain a situation to take charge of an apiary either now or in the spring. He speaks German, and can give good references as to integrity and ability. Address, ANTON BATTAGLIA,
39A1t 18 Sherman St., CHICAGO, ILL.

TO HORSE-OWNERS.

Peck's Ring Bone & Spavin Cure.

A new discovery. Warranted to cure any case of Ring Bone and Spavin without blistering or removing the hair, or money refunded. Price, $1 per box, with full directions; prepaid to any address in the United States or Canada.

Address, **D. S. PECK & CO.,**
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38A2t

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We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

HOW to WINTER BEES.

THE October number of the **American Apiculturist** will contain essays on **"Wintering Bees,"** from the pens of **James Heddon, G. M. Doolittle, A. E. Manum, Prof. Cook, Dr. Tinker, J. E. Pond, C. W. Dayton, P. R. Russell, G. W. Demaree,** and other equally prominent apiarists. Every bee-keeper should secure a copy. For ten cents in stamps this number will be mailed to any address on and after Sept. 25. No specimen copies of this number will be sent out. Regular subscription price $1.00 per year. Specimen copies (of back numbers) will be sent free. Address,

AMERICAN APICULTURIST,
33A6t WENHAM, MASS.

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First-Class Goods at Low Prices.

A FINE LOT OF ITALIAN BEES
For Sale Cheap.

Send Postal Card for Illustrated Circular and Price-List.

J. C. SAYLES.
13Dtf HARTFORD, WIS.

ATTENTION, BEE-KEEPERS ! !

NOW is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates: 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
32Atf COLERAINE, MASS.

Golden Italians.

WARRANTED Queens 75 cts. each; per dozen, $8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mismated, they will be replaced with a nice Tested Queen of 1886 rearing. Address,

JAMES WOOD, North Prescott, Mass.
20A20t

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

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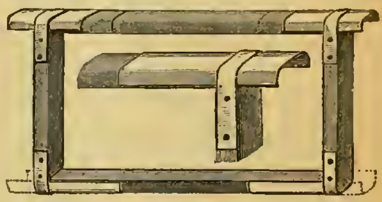
ONE HUNDRED

Large, Handsome and Extra-Prolific Select Tested Italian Queens $1.50 Each, or Three for $4.00,

By return mail. Safe arrival guaranteed. Make Money Orders or Postal Notes payable at Salem, Mass. Address, **HENRY ALLEY,**
38A2t WENHAM, MASS.

Metal Reversible Frame Corners.

ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.



Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. **F. M. JOHNSON,**
WASHINGTON DEPOT, Litchfield Co., CONN.
32Atf

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT**, Laceyville, Pa.

FREE! New Book of Fancy Works with **100** Illustrations, **150** New Stitches, **10** Special Offers, **200** Picture Bulletin 48-col. story-paper, all for 4c postage
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33A13t

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TEN VALUABLE BOOKS FREE!!

The Publishers of **City and Country**, a twenty-eight page publication containing from twenty-five to thirty illustrations in each issue, in order to increase its circulation, make the following unparalleled offer for the next few weeks: To everyone who will remit by **Postal Note** the amount of the regular yearly subscription—fifty cents—they will send postpaid any ten of the books in the list below and City and Country for one year. These books are published in neat pamphlet form, many of them **handsomely illustrated**, and all are printed from **good type upon good paper**. They treat of a great variety of subjects, and we think that no one can examine the list without finding therein many that he or she would like to possess. In cloth-bound form these books would cost **$1.00 each.** Each book is complete in itself.

1. **The Widow Bedott Papers.** This is the book over which your grandmothers laughed till they cried, and it is just as funny to-day as it ever was.
2. **Winter Evening Recreations,** a large collection of Acting Charades, Tableaux, Games, Puzzles, etc., for social gatherings, private theatricals, and evenings at home; illustrated.
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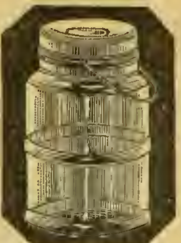

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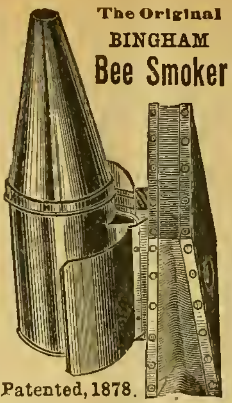

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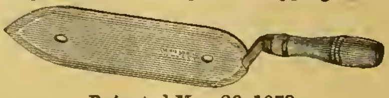

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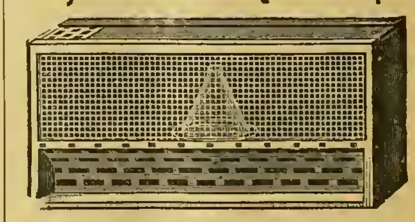

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AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Oct. 9, 1886. No. 40.

The Canadian Exhibit of honey in England consists of 40 tons. The comb honey was packed with great care, and arrived in good condition; it amounted to some 15 tons. The exhibit is for the "Indian and Colonial Exhibition." We will give further notice of it next week.

◆

We Learn that G. L. Marshall & Co., of La Salle, Ills., who wanted consignments of honey, are frauds, and that they have been arrested for using the United States mails for fraudulent purposes. It will not do to ship honey to unknown parties.

◆

Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year? When you do so, please select any 25 cent book in our list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887, —will you not assist us to obtain them?

◆

Their Main Stay.—Mrs. L. Harrison, in the *Prairie Farmer*, during the late drouth, remarked as follows concerning sweet clover:

> The blue grass has turned brown, and crumbles under the feet, by reason of the drouth, yet sweet clover blooms, and is visited from early morn until eve by the bees, which are making a living chiefly from it, which is another proof of its great value as a honey-plant, as it fills the interim between clover and fall bloom.

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

Reduced Railroad Rates to the Convention at Indianapolis has been secured only for the round trip from Chicago to Indianapolis and return. Mr. Dougherty, the Secretary, has made several applications for reduced rates without avail. On Sept. 29, 1886, he sent us the following for publication:

> Please announce in the BEE JOURNAL our failure to secure reduced rates. Our friends think strange that rates have been secured from Chicago and no further. I have again been before the Passenger Agent Pool here, but they refuse to do anything, even over the roads from Chicago.
>
> FRANK L. DOUGHERTY.

After his first refusal he wrote to us, and we also applied through the Pool Agent here, but was refused in the same language exactly as that used to Secretary Dougherty. Then we "pulled another string," through a friend of ours here, and obtained reduced rates on all the roads between Chicago and Indianapolis. We mention this only to show that the Secretary is in no wise to blame for not getting the usual reduction. Had the Convention been held in Chicago we might have succeeded in getting the reduction asked for; but when it was proposed to carry passengers away from Chicago, we found it up-hill business; and we do not think we should have met with any success had it not been for our friend who assisted us in "pulling the ropes" in the right direction.

◆

Wednesday.—It is a serious blunder to appoint a District or National Convention to commence on Tuesday morning. In order to get there, persons living at some distance are obliged to leave their homes on Sunday (and some on Saturday night) in order to get there at the first meeting. This is true also of some who live on railroads requiring two or three "changes" to "get there." As this mistake is so often innocently made by those having the matter in charge, we have concluded to make this public protest against such blundering in the future.

The North American Bee-Keepers' Society this years is called to meet at Indianapolis, Ind., on *Tuesday* at 10 a.m. We know of several prominent apiarists who *cannot* get there until Tuesday night or Wednesday morning, unless they pay some $8 or $10 extra, which, of course, they do not wish to do, and hence will be *absent from all the first day's sessions.*

We do not blame the present executive committee for this—they have but followed the example before them, the last few meetings of the society having been begun on Tuesday—but we desire to enter an earnest and public protest against any future meetings being called before Wednesday morning.

◆

The October number of the *Apiculturist* has eleven articles on the wintering problem. These articles cover the entire ground, and are by some of our best apiarists.

◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

The Last Call for the intellectual feast at Indianapolis, beginning next Tuesday, Oct. 12, 1886. If you miss being there, you cannot blame the BEE JOURNAL for not giving you due notice. The meeting will be largely attended by many of the principal apiarists of America, and promises to be an intellectual feast, from which you cannot afford to absent yourselves. If you go by way of Chicago, write to the editor of this paper AT ONCE for a certificate to entitle you to reduced rates on the railroads between Chicago and Indianapolis. The tickets are good from Monday to Saturday, Oct. 11 to 16, 1886.

To Indianapolis there are four routes from Chicago—the Kankakee, leaving at 9.10 a.m. and 8.00 p.m.; the Monon, 6.05 a.m. and 7.30 p.m.; the Pan Handle, 8.30 a.m. and 8.30 p.m.; and the Chicago and Eastern Illinois, at 8.00 a.m. and 8 p.m. every day. On all of these railroads the reduced rates for a round trip for $7.30 can be had upon the presentation of a certificate signed by Thomas G. Newman.

On the Kankakee Route, trains leave the depot at the foot of Lake Street; on the Pan Handle, trains leave from the Canal Street Depot; on the Monon and Chicago and Eastern Illinois, trains start from the Polk Street Depot. We make these announcements to prevent mistakes.

◆

Sweet Clover.—Prof. A. J. Cook, in answer to a question in *Gleanings*, makes the following statement concerning sweet clover and its cultivation:

> 1. Sweet clover is a very excellent honey-plant. 2. It is very beautiful, both from its rich fine foliage and graceful sweet-scented blossoms. Surely, ragweed, mayweed, smartweed, etc., bear no comparison to it as an adornment to the highway. 3. It is not bad to spread at this place. We rarely find it starting at any considerable distance from our beds; and when it does start in meadow or pasture it rarely holds on, being choked out by our cultivated grasses. 4. When once started it is no difficult matter at all to get rid of it. As is well known, this clover is a biennial, and grows from seed, flowering the second year. Thus by cutting while in bloom, or before the seeds mature, we shall quickly extirpate it. It cannot remain longer than two years after such cutting, as it must come from seed every other year. So I am free to urge farmers to foster rather than destroy this plant. At this writing our beds of sweet clover—(*melilotus alba*) are in full bloom, and it is hard to say which is more attractive to the bees—this or the basswoods, which are also in full bloom.

◆

Oleomargarine.—The act of the late session of Congress regulating and legalizing the sale of oleomargarine takes effect on Oct. 31, 1886. Instructions, prepared by the Commissioner of Internal Revenue, are being sent to the revenue officers in the several districts, with the necessary revenue stamps, etc. We understand that the Commissioners construe the Act of Congress as relating only to imitations of butter consisting of mixtures of tallow, suet, beef-fat, etc. Mixtures of lard not being included under the term oleomargarine.—*Exchange.*

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Getting Bees into the Sections.

Query, No. 317.—All our surplus this year is from white clover. When it first began to bloom, bees worked very actively. The weather became a little dry, and instead of putting the honey into the supers, which were filled with the best of foundation, they stored it below. As fast as a young bee hatched, they filled up the cell with honey, instead of letting the queen lay in it, until in the whole 8 frames there was not a space 6 inches square that was not filled with nectar. I exhausted my ingenuity in trying to force them into the sections; but go they would not, and go they did not until the season was about half over, then they went up slowly, and averaged only about 25 pounds to the colony. They did not swarm, and when they should have been booming at the end of the clover bloom, they were quite weak. How can I prevent an occurrence of this another season? It is the first time I ever had queens crowded out, and I want it to be the last. Other colonies within 100 yards of mine gathered 50 or 60 pounds each.—W. P. K.

If *they* would not put it in the sections then *I* would put it in the extractor.—H. D. Cutting.

It is difficult to answer without knowing more of the management. Could there have been any fault with the queens or the strain of bees?—W. Z. Hutchinson.

Contract the brood-chamber, or remove the comb in the brood-chamber and fill above in sections with foundation. Reversing the brood-frames also helps, as does uncapping honey in the broad-frames.—A. J. Cook.

You do not mention what it took to to exhaust your ingenuity, so we are in the dark as to what further to suggest. They might have done better with less room in the brood-chamber. Possibly uncapping their frames of honey and putting them in the middle of the brood-nest might have been effective.—C. C. Miller.

The trouble is in the strain of bees. A little Syrian blood will effectually remedy the difficulty. Syrio-Albino or Syrio-Italian bees never choke up the brood-combs with honey, it matters not how much may come in or how little the room may be. They are greatly superior to Italians, in my estimation, for comb honey.—G. L. Tinker.

I never, in any year, had any bees act so badly. I can conceive that bright, golden Italians in a deep hive, with bad communication to the surplus department, would do this years ago. I had these bees act similarly in less favorable times of the year.—James Heddon.

The above question is a long one, and the only explanation I can give is, that the queens were failing in prolificness. The size of frames not being given, perhaps the queen was crowded out by having too small a brood-chamber.—J. E. Pond, Jr.

Contract the brood-chamber so that at the beginning of the honey-flow only brood is in this apartment. Empty comb in the brood-chamber at the beginning of the honey-flow generally leads to the crowding of the queen, and little honey in the sections.—G. M. Doolittle.

Without knowing the exact condition of the bees at the time of the commencement of the bloom, it is difficult to give a correct answer. Sometimes we find colonies that hesitate about working in sections, and have to be coaxed there. But in all probability your bees had not working force enough, at the time of the harvest, to gather any more honey than what they found room for below. There may have been bees enough to run the lower story, but not the sections. Have your colonies strong at the proper time.—J. P. H. Brown.

I think it most probable that while your colonies may have been strong in bees, you had comparatively few field workers at the beginning of the honey harvest. I have often lost heavily on this account. If you put some sections in the section-case, which contained drawn comb and some honey, and the bees did not commence work there, you may know that that was the trouble.—G. W. Demaree.

Feeding Back Extracted Honey.

Query, No. 318.—Has the experiment ever been tried of feeding bees good extracted honey to be stored in the sections? I can buy all the extracted honey I want at 5 cents per pound, and can sell comb honey for 15 cents per pound; but I cannot sell extracted at any price.—W. M.

Yes, but as a rule it does not pay.—G. M. Doolittle.

The experiment has been tried time and again, and nearly, if not quite every one who has tried it has abandoned it.—W. Z. Hutchinson.

Unless you can succeed better than I have done, you will never get rich feeding 5-cent extracted honey to produce 15-cent comb honey.—C. C. Miller.

The experiment has been tried, but has often failed even with experts.—A. J. Cook.

Yes, but I do not think it has been a pecuniary success. You might try a few hundred pounds on some of your very strongest and richest colonies.—J. P. H. Brown.

I have tried it, but for some cause the honey soon candies in the combs, and becomes almost as hard as maple sugar. Perhaps it would not if I had diluted the honey with water in feeding.—G. L. Tinker.

It has, but the experiment as yet has never been found to pay, so far as I have any knowledge of the matter. I have tried it several times myself, but the results have been far from satisfactory.—J. E. Pond, Jr.

If all of the needful conditions were known and supplied, I do not know but it might be made to pay, but no such difference between the price of comb and extracted honey can long exist anywhere. It can hardly pay to gather a crop twice and feed it once in order to have it ready for market.—James Heddon.

It has often been tried, and generally without success. I could not give my plan here, to convert extracted honey into comb, for want of space. But if you will distribute some nice extracted honey among your neighbors—poor and rich—as a friendly gift, tell them you want them to try your pure liquid honey—if you do not get some orders for it after that, please let me hear from you.—G. W. Demaree.

It has been tried, but from many reports it did not pay unless there were a lot of unfinished sections to fill out.—H. D. Cutting.

Honey-Dew—Bee-Poison.

Query, No. 319.—1. Is the honey gathered from honey-dew a wholesome article of diet, both for man and the bees? 2. Does often being stung by the bees, so poison the system as frequently to bring on malarial and rheumatic fevers?—Iowa.

1. It may be unwholesome, but I prefer to be a little sick before I should want to eat it. 2. I do not know.—H. D. Cutting.

1. It depends upon the nature of the honey-dew. We have seen some that we liked better than ordinary molasses, although it was as dark as the latter.—Dadant & Son.

1. It may be in some instances. 2. Some bee-keeepers feel certain that they have been so afflicted.—W. Z. Hutchinson.

1. It is from some species of honey-dew. 2. I do not thimk so. I have been stung as high as fifty times a day, with no ill effects.—J. P. H. Brown.

1. I have never seen any honey-dew, so I could not say. 2. I could not say, but I think not. I have had both fever and ague and the rheumatism since I have been keeping bees.—G. M. Doolittle.

1. It may be, but very frequently it is not. I do not think so. Before keeping bees I was much troubled with malarial fever. Since then hardly at all, and I have had my share of stings. The pain and irritation at first was considerable; now it is very slight.—A. J. Cook.

1. The common expression, "honey-dew," is very indefinite. Some stuff I have seen gathered from the bark-lice is filthy and unwholesome beyond question. But some samples I have seen that was gathered from the leaves of trees looked nice, and I

see no reason why it is not wholesome.—G. W. Demaree.

1. We have so little of this "honey-dew" that I can only say that friends tell me that some samples of it winter bees as well as honey. 2. It might, I should think. I feel sure that a chronic rheumatic neuralgia or neuresthenia is no uncommon result from years of bee-poisoning.—James Heddon.

1. I have had very little experience, but I can hardly believe that honey with so disagreeable a taste as some of it has, can be wholesome for man or bee. Many winter losses have been laid at the door of honey-dew. 2. I think not. It has some reputation (whether justly or not I am not prepared to say) as a remedy for rheumatic affections.—C. C. Miller.

1. It is not so considered by the great majority. 2. I am not aware that such is the case; in fact many claim that the opposite results follow in rheumatism. I cannot conceive how malarial fevers can be cured by inoculation of the poison of the sting of the honey-bee, as it is antiseptic in its nature.—J. E. Pond, Jr.

1. I do not think it is. 2. No, a bee-sting has only a temporary effect. The poison does not accumulate in the system. I believe, however, that after being stung enough to cause fever, that one should be careful not to get over-heated by working in the hot sun. The use of the common tomato as a food is in my opinion productive of ten fold more injury to the human system than being frequently stung by bees.—G. L. Tinker.

Wintering Bees in Second-Stories.

Query, No. 320.—In wintering bees in a two-story chaff hive, how would it do to put in 3 or 4 brood-frames in the first story for the bees to cluster on, and the same number of frames with sealed honey in the second story, over the brood-frames, for winter stores; then use two division-boards, letting them extend from the bottom-board of the hive to the top of the second story? Then there will be 3 or 4 inches of dead air space on each side of the bees and stores in addition to the double walls packed with chaff. What I want to know is this: 1. Will it do to put winter stores above the brood-nest? 2. Will the bees cluster on the brood-frames and go up-stairs for food, or will they go up in the second story and stay? 3. How would it do to place bees and stores all in the upper story and leave the lower story empty (as an air-chamber) except one frame of comb to act as a ladder for the bees to go up and down on? The cluster would then be so far from the entrance that the cold air coming in would not affect them so much.—Florida.

1. Yes. 2. Yes. 3. It will work well in your climate. But in Florida you do not need chaff hives, nor any other fixtures intended for a cold climate.—J. P. H. Brown.

There is too much room for escape of heat above in such a plan. We do not like it, but it may do for Florida. —Dadant & Son.

My experience is, that bees will go up-stairs and stay. Have had the best success with eight frames in the body of the hive, and it on the platform.—H. D. Cutting.

1. I think so. 2. As soon as the brood and most of the honey is gone, they will likely move up-stairs to stay. 3. I can see no harm from the empty space below, and it might be some benefit.—C. C. Miller.

The proposed plan might work well here at the North, but for Florida I should think it would be labor thrown away.—G. M. Doolittle.

I think the bees would cluster on the honey and stay. I think the last mentioned plan a good one.—W. Z. Hutchinson.

1. The bees, so far as my experience goes, winter in the tops of the hives. I prefer a single story, as I find a frame as shallow as the Langstroth is safer for wintering than a deeper frame. 2. They will go for food till too cold for them to do so. 3. It would be far better than the first proposition, but would give, in my judgment, too much space below.—J. E. Pond, Jr.

I have wintered bees for years in two-story hives; sometimes they winter in the lower and sometimes in the upper story. I have seen little difference whether they winter above or below. When they go above to stay there they sometimes exhaust their stores above, and starve with plenty of stores in the lower story; for this reason I prefer to have all the stores in one apartment.—G. W. Demaree.

I should not do it. If they clustered below with little honey, and it came very cold, they would starve. I see no use in their having the double space to warm. Could I secure it easily I should like 2 inches below the brood-frames.—A. J. Cook.

The bees should, and usually will, cluster where the stores are in chambers of the size you mention. They would go into your second story and stay. The idea of empty story under the home would do no harm, if you still have room for thick packing above. Many believe it to be very advantageous.—James Heddon.

There will be too much trouble and expense about the plan suggested to make it desirable, even if it was a good one. The successful bee-keepers of the future will be those who use the cheapest hives and fixtures, and the most expeditious methods capable of fulfilling the purposes required.—G. L. Tinker.

North American Bee-Keepers' Society.

FRANK L. DOUGHERTY.

The North American Bee-Keepers' Society will hold its 17th annual convention Oct. 12, 13 and 14, 1886, at Indianapolis, Ind. The meeting will be held in Pfofflin's Music Hall, 82 and 84 North Pennsylvania Street, one of the most pleasantly situated halls in the city, having good ventilation and plenty of light. The Society head-quarters will be at the Occidental Hotel, corner of Washington and Illinois Streets. The regular rates of this hotel are $3 per day; special rates for those in attendance at the convention, $1.50 per day.

The Northwestern Bee-Keepers' Society, the Indiana State Society, the Eastern Indiana, with various county and joint societies will meet in union with the North American, making it one of the most important meetings of bee-keepers ever held in the country.

Every thing possible will be done to make the meeting pleasant and entertaining. An earnest, cordial invitation is extended. Following is the programme:

FIRST DAY—TUESDAY.

Forenoon Session, 10 a.m.—Convention called to order. Address of welcome, by Gov. I. P. Gray; "Response" by the President, H. D. Cutting; "Welcome to the City," by Mayor Caleb S. Denny; "Thanks," Dr. C. C. Miller, President of the Northwestern Society. Calling the roll of members of last year. Payment of annual dues. Reception of new members and distribution of badges; reports of Secretary and Treasurer. Announcements.

Afternoon Session, 2 p.m., Special Business.—Annual address of the President; "Bee-Studies," Prof. A. J. Cook, Agricultural College, Mich.; "Apicultural Journalism," John Aspinwall, Barrytown, N. Y.; "Bee-Literature," Thomas G. Newman, Chicago, Ills.; "The Coming Bee—What encouragement have we to work for its advent?" R. L. Taylor, Lapeer, Mich. Subject for discussion, has "Apis Americana" been reached?

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions that may have accumulated during the day.

SECOND DAY—WEDNESDAY.

Morning Session, 9 a.m.—Announcements. Communication. Call of the Northwestern Society to elect officers. Election of officers of the Indiana State Society. Call to order. "Rendering Comb into Beeswax," C. P. Dadant, Hamilton, Ills.; "Foul Brood," A. J. King, New York. "North American Bee-Keepers' Society—Past, Present and Future," Rev. W. F. Clarke, Guelph, Ont. Selection of place for holding meeting in 1887. Election of officers.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. "Bee-Keeping and Apiculture," Prof. N.W. McLain, U. S. Apicultural Station, Aurora, Ills.; "Feeding Bees for Winter," Jas. McNeill, Hudson, N. Y.; "Wintering Bees," Dr. J. B. Mason, Wagon Works, Ohio; "Solid Truths relative to the Apicultural Interests of the east coast of Volusia county, Florida," by John Detwiler, New Smyrna, Fla. Subjects for discussion, "Is the use of Foundation Necessary in Modern Bee-Culture?" "Are Perforated Honey-Boards a Success?" Unassigned essays.

Evening Session, 7:30 p.m.—Announcements. Miscellaneous business. Discussion of questions in question-box. Social communications.

THIRD DAY—THURSDAY.

Morning Session, 9 a.m.—Announcements. Miscellaneous business. Communications. "The National Bee-Keepers' Union," by Thomas G. Newman, Chicago, Illinois. "A Talk on Hives," by James Heddon, Dowagiac, Mich.; "Reversible Hives and Frames," J. E. Pond, Jr., Foxboro, Mass.; "Drones and Drone Comb," W. Z. Hutchinson, Rogersville, Mich.; Reports of Vice-Presidents; "Progress of Bee-Keeping in Indiana," Jonas Scholl, Lyons Station, Ind. "The Future of Bee-Culture," G. W. Demaree, Christiansburg, Kentucky.

Afternoon Session, 2 p.m.—Announcements. Miscellaneous business. Explanation of various articles on exhibition.

Indianapolis, Ind.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○→ east; ←○ west; and this ○↗ northeast; ↖○ northwest: ○↘ southeast; and ↙○ southwest of the center of the State mentioned.

For the American Bee Journal.

A Call on Mr. J. B. Hall.

WM. F. CLARKE.

Mr. J. B. Hall does not like notoriety. He prefers to keep shady, and to be let alone. How far a man is to be indulged in this love of privacy and concealment, is a somewhat perplexing question to one who is always "takin notes" with an ultimate design to "print 'em." I got rather a brusque reception the other day when, being in Woodstock, I took the opportunity of dropping in on Mr. Hall. "Are you going to drag me before the public again? I suppose we shall soon have another 250 pounds of honey story going the rounds." I felt chagrined and annoyed at *myself* for not having contradicted that 250 pound mistake. How it got into print, whether by a slip of the tongue, a slip of the pen, or a mistake of the printer, I do not know, but I quite intended to correct it, and ought to have done so long ago.

I am inclined to think I got Messrs. Jones and Hall "mixed up" in my mind. Mr. Jones made an average one year of 250 pounds of honey, spring count. But it was extracted. Mr. Hall's was comb honey, and should have been reported as 150 pounds average, spring count. I hope this explanation will be satisfactory to all concerned, including Mr. C. W. Dayton. See his article on "Troubled Bee-Lore," on page 441 of the AMERICAN BEE JOURNAL for this year.

Mr. Hall objected at the Detroit convention that the bee-periodicals report successes but not reverses in bee-keeping. Having given publicity to success in his case, it is only right for me to balance up matters by chronicling the opposite condition of things. A sad reverse has befallen our friend, the present season. To quote his words: "Total failure is my record for 1886." There are several explanations of this. Mr. Hall was absent from home last fall attending Fairs, and his bees did not get the usual thorough preparation for winter. A number of colonies was too light. He was building a new house and, as usual, the contractors were behind time in fulfilling their contract. Hence it was late, too late when the bees were put into winter quarters.

Again, a defect in the drain caused the presence of water in the bee-cellar to a depth of about six inches. Finally, the furnace fire was let out too soon, with the idea that it would not affect the bees, there being a 12-inch brick wall between the furnace and the cellars. But it did affect them enough to check brood-rearing, so that the multiplication of workers was not accomplished in time for the first run of honey. That first run was all there was around Woodstock. After a brief harvest from the earliest white clover blooms, there was absolutely no honey yield. Alsike clover has been a most important source of honey-gathering heretofore. This year there was none from that source, and none from the linden.

Our friend was not despondent or in tribulation over this state of affairs. He says he makes it a principle not to cry over what he can't help. Well, I suppose we all do that, but some of us are not entirely successful in carrying out the principle. Mr. Hall is. Perhaps he has a more comfortable bank account than some of us. That has a great deal to do with the ease or difficulty of being consoled under unfortunate circumstances. This is the second time in fifteen years of bee-keeping that Mr. Hall has had an experience of "blasted hopes."

On the former occasion the year of failure was followed by one of double success, and taking the average of the fifteen years, the showing is not discouraging. All the readers of the AMERICAN BEE JOURNAL will join with the writer in the hope that this year of dearth, like the former one, may be succeeded by a year of plenty that will make up for losses, and keep up the average to the point of encouragement.

Mr. Hall has had hardly any swarms the present season, and though he obtained fifty of the new Heddon hives, is unable to report any practical experience with them. He has the finest specimens of the Carniolan bees I have yet seen, and is favorably impressed with them. I am sorry that we shall not see his genial face at the Indianapolis convention. He is getting very skeptical about conventions. Perhaps we pumped him too much at Detroit. Never mind, friend Hall. It is "give and take" at these meetings. Last time it was "give" in your case. Come again and "take" *all you can get!*

Guelph, Ont.

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For the American Bee Journal.

Increase of Bees by Division.

W. J. CULLINAN.

After an experience of three years in the (to me) ever inviting and wonder-revealing field of apiculture, I have arrived at the conclusion that "increase by division" is the more feasible, as well as most lucrative plan for those who are working for the greatest amount of honey and increase combined.

The first year I kept bees I allowed natural swarming; and although I had but 7 colonies, they were the source of a great deal of trouble and annoyance, causing me to climb trees, saw off limbs, and perform other dangerous and disagreeable feats, far better suited to the gymnasium than to the apiary. No wonder I became disgusted with this old, fossilized, moss-grown method of "handling bees."

So this year I took a step forward and began practicing the new method of dividing and artificial swarming, by which method I not only saved my trees from disfiguration, and my limbs from a possible worse fate, but secured a more than two-fold yield in proportion to the number of colonies kept, and doubling the number as I had done the previous years by the swarming method.

Judging from an experiment made the past season, I believe I can take 10 good strong colonies of bees in this locality, where the average is from nothing up to 50 or 60 pounds per colony, of a good season, treble the number and procure 200 pounds of comb honey per colony, spring count.

An instance to illustrate: From a three-frame nucleus made on the 17th of last May, and furnished with a ripe queen-cell from an Italian colony, the young queen of which afterwards mated with a black drone, I obtained 48 pounds of comb honey in one-pound sections, and 27 pounds of extracted honey, making 75 pounds in all, and a full colony of bees at the wind-up. And this amount of surplus might easily have been augmented by judicious management.

This humble article is offered for the benefit of those who wish to turn from the "smooth-worn ruts" of our fathers, and enter upon the higher and better plane where brains will in the future be appreciated, and labor better compensated.

Mt. Sterling, ←○ Ills.

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For the American Bee Journal.

Plain Sheets of Wax.

J. E. POND, JR.

On page 536 Mr. J. F. Hays accuses me of "contumeliously" answering the question of L. J. S. in regard to plain seets of wax. I desire to say, that in answering the various questions sent me for the Query Department, I have endeavored to give nothing but my own opinions, based on my own experience, and so far as I am aware, I have never indulged in contemptuous or sarcastic remarks. It would seem that seven of us viewed the matter in the same light, and I am not at all sorry that we differ from Mr. H., whose experiments that cause him "squarely to take issue with the seven," have been made with sheets of comb, only 4 inches wide; nothing in fact but "starters." In regard to the slightly sarcastic remark of Mr. H., in which he intimates something in regard to "ruts worn smooth," I will say that I have been more or less prominently before the public as a bee-keeper, and writer for over 16 years; that I have always boldly traveled out of the old ruts, when I saw anything to be gained thereby; and further, even, that I think that during the last 16 years instead of following, I have been pretty near the front, and have done my share of making the ruts that are now being traveled in, by the most experienced of my brethren.

I still say that with the low price of foundation, and the ease by which we can control the matter of cell sizes by its use, I fail to see any practical advantage that will follow the use of plain sheets of wax, even if but 4 inches wide; and further, that as drone comb is not usually built at the tops of frames, I should not expect that any would be built on starters in the brood-chamber, especially if room was given for so doing elsewhere.

Foxboro,○+ Mass.

For the American Bee Journal.

Has Nature Made a Mistake ?

GEORGE F. ROBBINS.

Mr. O. N. Baldwin, on page 600, does not meet the gauntlet thrown down at all. I say again, this talk about nature ("or the "Great King") making a mistake amounts to little or nothing, as against the testimony of experience. And, reasonable or unreasonable, I do believe that under certain conditions, or in certain localities, as I said in my article on page 567, bees will winter better on sugar than on natural stores, because the array of evidence presented in the testimonies of Heddon, Hutchinson and Cook is conclusive, and has never to my knowledge been fairly met.

I repeat, to successfully controvert those testimonies, they must be opposed by precisely the same experiments, under like conditions, with exactly opposite results. I appeal to any fair and candid man if that position is not good. Now, what opposing evidence does Mr. Baldwin offer? Why, he gives one experiment with 4 colonies, and instead of being shut in gaol for five long months without a break, they have two good flights in that time. There is a vast difference between the conditions in Missouri and Michigan. My latitude is higher than that of Mr. Baldwin, and my bees winter very well on natural stores. The argument that, because 2 colonies died of starvation, they died for want of honey and pollen, is a stunner. It is too bad that they did not have access to some sugar syrup about that time.

Mr. B. says nothing about the quantity of stores they had when put away, whether they had been breeding much, or showed signs of diarrhea, etc. Altogether his testimony proves nothing. The fact that sugar syrup may be safer winter food for bees in Michigan than natural stores, does not argue that nature has made mistake. We find laws of death as well as life permeating all nature, and for good reasons, although we may not always undertand them.

The same Diety who made the atmosphere for man to breathe in life and health, has charged it with malaria and pestilence to produce disease and death. But He has at the same time created roots, herbs and minerals, and endowed man with faculties to discover and apply their properties so as to largely over-rule these forces of death. So He has created the honey-bee with instinct and nature to multiply with wonderful rapidity where conditions demand it; but at the same time He has sown the seeds of death to prevent them becoming an evil rather than a good. And He has made man, in this as in a million other cases, lord of the very laws and forces of nature to over-rule them to his own good. To meet the exigencies that arise in a state of nature, the instinct of the honey-bee is to rear drones in such numbers as to become a nuisance in modern bee-culture.

But this same rule in nature may be and is annulled by the art of man. So, also, if adverse conditions may discriminate against certain regions of country, man possesses the power to put these laws of death under his feet—by the very simple expedient of using sugar syrup. There, my friends, is some theorizing, if that is the proper term, as plausible as any that have been offered, I think.

Mechanicsburg,⊙ Ills.

For the American Bee Journal.

An Apicultural Review.

EUGENE SECOR, (30—40).

I suppose we all think the season just past the most remarkable one we ever knew in Iowa. Perhaps that is because we have the most vivid recollection of events the most recent. When we do not keep a record of the weather, the last cold snap is apt to be the coldest, the last dry spell the severest drouth, and the recent heated term the hottest weather we ever experienced.

That is the way we bee-keepers talk about the season just past. We say we never saw such a peculiar year; that contrary to all past experience the spring opened favorably, and the honey-flow began at once, and then after a brief but plentiful yield the supply suddenly ceased—a thing hardly known in this part of the State.

In saying this is unprecedented we may be a little outside of the truth. As we have not always kept bees, and a faithful record of the weather is not at hand, we have to draw on our impressions for our facts. It has certainly been widely different from any year immediately preceding it.

After a very protracted and very severe winter, the bees were removed from their depositories in fine condition, and with but slight loss. This was the case with every one who had bees. It did not seem to matter much how they were wintered, either. Spring came with such etherial mildness that breeding began at once. Scarcely any unfavorable weather to chill the hatching brood or to cause spring dwindling. The early wild flowers were rich in tempting sweets. Fruit blossoms yielded up their wealth of nectar. Every opening petal seemed to invite to a feast of honey or pollen. All normal colonies were encouraged to do their best in rearing brood, and the crowding of bees around the entrances showed their readiness to respond to the stimulating effects of the weather and the flowers.

At the beginning of white clover bloom, about June 1, most of them were populous enough to go into the supers. There was the time that a knowledge of the situation was needed. The wide-a-wake bee-keeper at once righted up his pitcher ready for the shower. The Rip Van Winkles' did not wake up until the shower was about over. All the honey we got this year, substantially, was gathered in forty days. Everything came with a rush. The white clover harvest lapped over on to basswood bloom so perceptibly that the bees seemed bewildered at the profusion of ambrosial sweets. They were reluctant to leave the pearly drops of the former for the equally tempting chalices of the latter.

Usually, white clover is gone before linden blooms. We often get, also, a good yield from sumac. This year not a drop. Quite generally the last half of July and August give us the bulk of our surplus. This year scarcely any more honey was gathered after the middle of July than the bees required. The long continued drouth seemed to effectually dry up the honey fountains in all the fall flowers. Buckwheat yielded some honey, but so little of it is raised in this vicinity that the amount was not noticed. What surplus we have is therefore mostly white honey of excellent quality. My own colonies averaged about 75 pounds, spring count, one-fourth extracted, balance mostly in one-pound sections. In consequence of the light fall yield there are some unfinished sections.

Forest City,♂ Iowa.

For the American Bee Journal.

Doolittle's Report—A Peculiar Season.

G. M. DOOLITTLE.

No other industry in the world is probably more dependent upon the weather than is apiculture. For growing crops the weather may be bad at times, but when it does come good weather, they are generally ready to make a rapid growth, thus regaining what was lost by the previous inclement weather. It is not so with honey gathering, for if the weather is bad while the honey-producing flora is in bloom, all the good weather afterward cannot make up for the loss. If the rearing of bees so as to get numerous colonies was all there is of bee-keeping, then the same thing applied to growing crops would be applicable to bees, especially if the apiarist supplied a little feed occasionally; but if the bee-keeper is to be successful as a honey-producer, nothing but good weather through some one of the periods during which nectar-bearing flowers bloom can make that success.

These thoughts are called out upon looking over the honey season just past, for taking it all together this has been the most peculiar season I ever witnessed for bees. Spring opened very favorable, much more so than has been the case for the past eight years, which, together with little or no loss in wintering, caused the bee-keepers about here to be jubilant. Bees reared more brood in April than they commonly do in May, and by the time apple and other fruit trees were in bloom, many of the colonies were strong enough to swarm, especially those wintered in cellars.

Right here I wish to mention a curious fact. I had always thought that if the weather could only be good for the first three weeks after the bees were out of their winter repose, so that they could fly every day we would have no trouble with what is called spring dwindling. Well, we had just such a time the past April, so the bees could fly every day for the first 24 days after they began to fly, and the result was that one-third of my colonies wintered on the summer stands died down so that at the end of those 24 days the hives were nearly depopulated of all their flying force, and colonies that a week previous seemed full of bees contained nothing but brood and young fuzzy bees, the old ones lying dead of old age almost in heaps in front of the hives.

While this was the case with those wintered on the summer stands those from the cellar which were left in until twelve of these pleasant days passed seemed to thrive beyond all conception, and were hanging out on the outside of the hives in large clusters during the bad weather in May.

But to return: This early brood-rearing consumed a large part of the old honey in the hive, and gave a force of bees large enough to work on the fruit bloom to good advantage, so that five days of warm, pleasant weather at that time would have secured from 30 to 50 pounds of honey to the colony, because we had the laborers to gather it, which laborers are generally deficient in other years. But the weather was warm and pleasant up to within three days of the bloom, when it came off cool, cloudy and rainy for two weeks, so that this force of bees was kept in the hive consuming honey rather than producing. The result was that the bees had to be fed for three weeks to keep them from starving; for the pleasant weather which came later, was of no use, for we always have a scarcity of flowers which yield honey between fruit bloom and white clover.

As the bees had to be fed, and the weather was bad, nature told them to retrench as much as possible, so they almost ceased to rear brood at just the time brood was most needed so as to give bees at the right time to secure the honey from our main dependence, basswood. During the first week of clover bloom the weather was fine, and as a part of the force was left (not having died), the bees did well on the little white clover we have here, many of the colonies getting started in the sections nicely. It now came cold and wet again, so that no more gain was made from that source, although the bloom lasted 20 or more days longer. The last half of any bloom always seems to afford the most honey when favorable weather continues, so it will be seen that opportunity was given for the bees to work only at a disadvantage.

Besides, the bees began to die off rapidly of old age, so that colonies which were in good condition, and at work in the sections two weeks previously, had scarcely bees enough left to care for the now rapidly increasing brood. In fact the mortality was so great that all over the bee-yard and about it in every direction the ground was thickly strewn with dead and dying bees. Basswood opened on July 8, while on the 9th the ten days of splendid honey weather we had been having ceased, and rain, rain was the "order of the day" for the next ten days. Two pleasant days now occurred during which the bees did their level best, what there was of them of the proper age to work, when the bloom came to a close.

I had hoped that the teasel would give some surplus, as there was a large acreage of that plant, but this yielded little more than a living for the bees, so that I was about to declare the season of 1886 *a failure* for honey in this locality, when all at once, as it were, the bees came in quite heavy loaded, and work in the sections was resumed, much to my joy and surprise. Upon looking about I found that the drouth, now setting in, had caused the large kind of red clover (of which there were many large fields saved for seed) to yield honey to such an extent that those fields seemed fairly alive with bees. This state of affairs continued for about ten days or two weeks, so that I now find that my crop figures up to 2,022 pounds, all of which is comb honey.

My report a year ago gave my number of colonies as 95, all of which had their own stores of honey. Out of the 95 three died during the winter, two became queenless, and were united with others, leaving 90. These were reduced by sales to 60, which number were largely drawn upon to form nuclei for queen rearing. From the above only 40 swarms issued, owing to the poorness of the season. I am now preparing the bees for winter, and shall put into winter quarters just as many colonies of bees as I have natural stores for, which number will be somewhere from 85 to 100. The colonies will be doubled down to suit the stores, weeding out the inferior queens so as to improve my stock as much as possible.

My experience has taught me that honey is the safest food for bees to winter on in this locality, allowing the bees all the pollen there is in the combs. If otherwise I should try the sugar as some others do, regardless of what has been said against bee-keepers using sugar for bees. As to the pollen all my experience proves that it is impossible to remove it all, and that there is enough left to give the bees the diarrhea if they choose to have that disease. By dividing the 2,022 pounds of honey by 60 colonies (spring count) it gives 33¾ pounds as the average yield per colony, which is the smallest yield I have had during any season, for the past 14 years.

Borodino,⊙ N. Y.

For the American Bee Journal.

Foundation in the Brood-Chamber.

FRANKLIN P. STILES.

The theory of hiving swarms on empty frames, giving starters only, and placing partly-filled sections above has always seemed sound to me, and each year since so strongly recommended by Mr. Doolittle, a portion of my swarms have been so treated. Notwithstanding the vehement assertion that I would "never be such a fool again," the plausibility of the theory has each year secured a continued trial. Mr. Hutchinson's advocacy of the plan still further strengthened my faith, and last year more careful experiments were made, wherein several new features were developed. The results, however, were far from favorable.

When Mr. Heddon's new hive first came to my notice, I felt sure it would settle the problem in a conclusive manner, for among the many admirable advantages it offered, its adaptability to the above plan seemed clearly apparent. Spring found me with 40 of the new hives with which I hoped among the many interesting experiments to get a positive solution to this solution. Dame Nature, however, had a word to say, and the poorest season for several years permitted the use of but 15 of the number for prime swarms. While more than fulfilling my most sanguine anticipations in every other respect, I am forced to admit that with me it has not settled the vexed question of the best method of hiving swarms, and that "the ghost still rises before me and will not down."

So far as drone comb is concerned there has been but little trouble, nor do I think any one will be bothered with it if the colony has a good queen, and the partly-filled sections from the old hive are immediately put in position on the new. Most of the swarms so hived built combs which would be considered very fine by any one not accustomed to handling those built on foundation in wired frames. They were nearly all somewhat "wavy," and when reversed to have them fastened solidly to the bottom-bar, required more or less straightening. Three colonies built combs so crooked that in getting them into working order, the apiarist was frequently heard blessing the man who invented comb foundation, or expressing sentiments which, by opposition, might be so construed.

Looking at the subject from the stand-point of this year's experience I find it true that the habit of storing in sections is most likely to be uninterrupted if starters only are given in the brood-chamber. This is a most valuable advantage. I believe that the different results received from apparently equally good colonies, the cause of which is so universally "shouldered off" on to the queens, can frequently be traced to the apiarist's failure to control the habits formed by the bees in early spring.

I also find that the most surplus, in a majority of cases, is secured by hiving swarms on starters only. You may say that ought to settle the whole matter. Perhaps it would if unlimited time was at the disposal of the apiarist, but such is not generally the case, and he may be "paying too much for his whistle."

I believe I can so manage the new hives that 35 cents worth of foundation in the brood-chamber will in no wise lessen my crop, save time enough to more than balance the first cost, have infinitely better combs, while the "fearful looking forward" is made to give place to a serene trust in the future solid comfort we have thereby securely provided. Thus while my experiments, as a whole, rather favor empty frames, my leaning is towards the "luxury" of comb foundation.

Haverhill, Mass.

For the American Bee Journal.

Sugar for Winter Stores.

W. Z. HUTCHINSON.

Mr. A. E. Hill, in his first paragraph on page 601, says: "But if the price is (of honey) is lowered as the result of producers giving the public occasion to believe that honey is obtained by feeding sugar, are bee-keepers more prosperous then?" It will depend, of course, upon the extent to which the price is lowered, as compared with the cost of sugar, plus the greater surety of wintering the bees upon sugar stores. It is difficult to ascertain the extent to which the public can be led to believe this falsehood, or to learn how much it really cares about the matter if it does believe it. Notice the extent to which commercial syrups are used, when it is known that they are adulterated with glucose, a substance which many regard as unhealthful, while there is no question as to the healthfulness of cane sugar. The use of foundation is open to objection upon the same grounds, yet no one thinks of discarding it.

In his second paragraph Mr. Hill says he cannot understand why I class "sugar feeding" with "foundation," and the "honey-extractor," *i. e.*, as an *improvement*. I think there is no question in regard to the extractor and foundation being improvements; but when extracted honey was first thrown upon the market, its beautiful clearness led many to believe that it was adulterated; and even now extracted honey is looked upon with suspicion, because of the ease with which it can be adulterated. Shall we make this an objection to the use of the extractor? I have several times called attention to the fact that foundation was all that ever gave any "backbone" to the Wiley sensation, still it is regarded as an "improvement." Now, when it has been shown that the use of sugar for winter stores enables many to winter their bees more cheaply and successfully, and to secure larger crops of honey, I am told that it is no "improvement." Why? Simply because it may assist in giving color to unjust accusations.

Other improvements are open to the same objection, but these other improvements are now old and well established, and to oppose them would be folly. But let no one suppose that these old improvements had not to run the gauntlet—the same ordeal through which all improvements must pass. I wish I had space to quote the whole of an article published on page 54 of the *Bee-Keepers' Magazine* for 1878, but must content myself with a few extracts: "Extracted honey, from its very nature, will be liable to such adulterations; and we already see the effect upon the market by this cry thus early raised against it."

Again: "Let any bee-keeper of experience contemplate for a moment the purity of commercial beeswax, or, what is more to the point, a quantity of refuse comb before it is adulterated. Containing, in addition to other impurities, dead bees in various stages of putrefication; with moth worms of all sizes, dead and alive, together with their excrement, and this to be cooked together in a kettle of water until the savory extract has thoroughly flavored the beautiful yellow wax, destined to become a delicious morsel, and component part of comb honey. And, in case your own stomach is not affected, I ask, cannot such a picture be used by our opponents against us?"

"We must keep comb honey free from the impression that it is other than the pure, beautiful food God has made it, working through the wonderful instinct He has implanted in these little creatures."

"But let the impression once go forth that it is otherwise, that it is 'doctored,' that it contains anything of questioned purity, that the beautiful comb is not the work of wonderful instinct, but a thing gotten up by machinery in any sense, and you have deprived it of an interest to the consumer that must effect the sale of it as an ornament and luxury to the table."

Do you not see, my brothers, how the honey extractor and comb foundation had to "catch it" when they were introduced? Almost exactly the same arguments were used against them as are now brought against the use of sugar for winter stores. But of what avail were these arguments? Mr. Hill admits that the right way would be to compare "the *pro rata* loss of bees wintered on sugar compared with that of those wintered on natural stores," and then asks me to give the *pro rata* of loss. He well knows that this is something *no one* can do, as no accurate statistics have been kept. In my own case the loss upon sugar has been nothing, while upon natural stores it has averaged 50 per cent. In his last paragraph, with regard to "Shall we stop using foundation?" Mr. Hill says: "Foundation is made from pure beeswax, which is solely the production of the apiary, and certainly its use should not be abandoned on the ground that 'sugar feeding' is objected to."

The fact that foundation is made of a "product of the apiary" is neither here nor there; the point is just this: Mr. Wiley stated, in a scientific journal, that artificial comb was made by machinery, that it was filled with scented glucose, and sealed over with a hot iron, etc. This was widely copied and read, people saw the smooth, white, perfect sections of honey; and at fairs and exhibitions they saw comb foundation and machines for its manufacture; putting all this together it made quite a plausible showing, and many believed the story. Nothing has done more, and is still doing more to give color to this unjust accusation than the use of comb foundation; and that foundation is made from a production of the apiary has no bearing whatever upon the case, and as its use assists in giving color to an unjust accusation, again I ask: "Shall we stop using foundation?"

Please remember that I do not assert that the use of sugar for winter stores will ever become universal, as has the use of the honey extractor or comb foundation; neither do I assert that those who now use sugar will always continue its use; but I do assert that this practice must stand upon its merits, and if it does possess merit, no amount of argument will bring about its abandonment.

Rogersville, Mich.

For the American Bee Journal.

Marshall County, Iowa, Convention.

The Marshall County Bee-Keepers Association met at Marshalltown, Iowa, on July 17, at 1 p.m., but owing to the busy harvest season at that time, but few were present; still the meeting seemed to be one of interest to all present.

The subject, "Fall bee-management," was discussed by Mr. Koeper and others, showing the necessity of looking over and preparing all colonies in good condition for winter, by contracting the brood chamber to suit the size of the colony, evening up the stores to suit their necessities, and feeding when neeeded. Also showing the desirability of late breeding in order to successful wintering.

Several other subjects were mutually talked over, we think to the benefit of all. Some reports were made for the season, but as they were not in full, and as there were but few members present, we withhold it till the next meeting, hoping to get a full report from all our members then.

The subject for discussion at the next meeting will be "Winter management of bees," and reports for the season.

At the opening Mr. Louis Koeper read an essay on "Modern Bee-Keeping," in which he remarked as follows:

"Honey and bees were known at a very early period, but the art of modern bee-keeping was unknown until the 19th century, when the Rev. Dr. Dzierzon, of Germany (who was a great naturalist), studied the habits of the honey-bee, and found that it was one of the most intelligent of insects. He placed them in transparent hives, and let them build in movable frames, where he studied their habits, and saw how quickly they filled their comb with honey.

"On the foundation of Dzierzon's Theory, Barron Von Berlepsch, near Linaberg, in the State of Hanover, Germany, also studied the habits of the bees, and improved the art by taking out full frames and replacing them with empty ones. He also invented the triangular top-bar, dipped it in wax, and by it guided the bees in building comb. In America the Rev. L. L. Langstroth, Mr. M. Quinby and Mr. Harbison improved upon this modern system of making it. The dry weather here in Iowa, this summer, and the a bundance of white clover gave a splendid honey harvest to those who used the opportunity to get it."

Asking all bee-keepers in the vicinity of Marshall county to meet with us, the society then adjourned to meet at the Court House in Marshalltown on Saturday, Oct. 16, at 10:30 a.m. J. W. SANDERS, *Sec.*

Le Grand,⊙ Iowa.

Convention Notices.

☞ The Sheboygan County Bee-Keepers' Association will meet at Chandler's Hall, at Sheboygan Falls, Wis., on Saturday, Oct. 16, 1886, at 10 a.m.
MRS. H. HILLS, *Sec.*

☞ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. BALDWIN, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Southern Illinois Bee-Keepers' Association will hold its next meeting at Benton, Ills., on Thursday, Oct. 21, 1886. F. H. KENNEDY, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet at Stuart, Iowa, on Saturday, Oct. 16, 1886. All interested in the busy bee are requested to be present. J. E. PRYOR, *Sec.*

☞ The Semi-Annual meeting of the Central Michigan Bee-Keepers' Association will convene in Pioneer Hall, in the Capitol Building, Lansing, the third Tuesday of October, at 10 o'clock, a.m.
J. ASHWORTH, *Pres.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, *Sec.*

☞ All are respectfully invited to attend the next meeting of the Bee-Keepers' Association of Eureka Springs, which will be held at Eureka Springs, Ark., on Oct. 23, 1886. Business of importance to every bee-keeper Northwest Arkansas will be before the meeting.
DR. S. S. PURCELL, *Sec.*

Local Convention Directory.

1886. *Time and place of Meeting.*

Oct. 6, 7.—Kentucky State, at Frankfort, Ky.
Jno. T. Connley, Sec., Napoleon, Ky.

Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.

Oct. 12—14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Oct. 16.—Sheboygan Co., at Sheboygan Falls, Wis.
Mrs. H. Hills, Sec., Sheboygan Falls, Wis.

Oct. 16.—Western Iowa, at Stuart, Iowa.
J. E. Pryor, Sec.

Oct. 19.—Central Mich., at Lansing, Mich.
J. Ashworth, Pres.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Oct. 21.—Southern Illinois, at Benton, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Oct. 23.—Eureka Springs, at Eureka Springs, Ark.
Dr. S. S. Purcell, Sec., Eureka Spring, Ark.

Oct. 23.—Wabash County, at Wabash, Ind.
Aaron Singer, Sec., Wabash, Ind.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Gathing Honey Yet. — Charles Sandhoff, Clifford, Ont., on Sept. 27, 1886, writes:

We started the season with 7 colonies of bees (6 six strong and 1 weak). They yielded an average of about 150 pounds of good comb honey. Extracted honey is of no account around here. Comb honey is selling at 20 cents, and extracted at 15 cents, but the sale is small. Last winter was a very hard one on bees; almost all died by starvation. The white clover blossoms and basswood was plentiful, and the bees are busy gathering honey yet.

Compelling the Removal of Bees.—John Booth, of Barry,♀ Ills., asks the following question, which is answered by Mr. J. E. Pond, Jr., at our request, as he is a lawyer, and knows best what may be done in such cases:

Has the town board a right to pass a law compelling all bee-keepers to move their bees outside of the incorporate limits of the town? Please answer in the BEE JOURNAL.

Mr. Pond replies as follows, to the above question:

So far as my own State is concerned, the town board (select men) have no right to pass such a law. If it can be *shown* that the bees are a nuisance, then the courts, upon petition, can order their removal. If they *affect* the *health* of any persons, the town board, as a board of health, can order their removal, but even then have no power to enforce the order. They must go to the courts for their remedy. What the statutes of Illinois may provide I do not know, but at common law no town board has the power to compel removal, even if they have the right to pass such an order; and such order can only be passed on the ground that the bees are a *nuisance*, and *that* must be proved before the courts. So I say, to sum up, that town boards *cannot* compel any one to remove bees by the simple passage of an order so to do.

North American Bee-Keepers' Society.—A. J. Fisher, East Liverpool, ♂ O., on Sept. 22, 1886, gives the following suggestions:

As this society has held conventions twice in New York, twice in Cincinnati, and this time twice in Indianapolis, Ind., I with many others would suggest that it would be justice if the members at the Indianapolis meeting would unanimously cast their votes for the next meeting to be held in the beautiful city of Cleveland, O., where the society was born. If held there in 1887, it should be the largest, most interesting and instructive ever held in America. Let us all who were there before (except those who have passed over to the other shore) meet again and learn of the progress made in our pursuit since the last meeting there, which will be 18 long years. Let us meet in Cleveland, O., for 1887, and have a good time.

[It is very encouraging to know that there are at least three places already suggested for the next meeting—St. Louis, Chicago and Cleveland. It is but a few years ago that it was located without invitation, with the hope that no one would attend, and that it would there die. Now all want it. What a change.—ED.]

Wired Frames.—In reference to building combs on wired frames, in Query, No. 309, on page 596, Mr. J. M. Shuck, of Des Moines,⊙ Iowa, sends this answer on Sept. 23, 1886:

Draw the wires taut, paint them with melted beeswax, level the hive laterally, and the centre of the comb will follow the wires. Use foundation for a starter.

Charles Sitts, of Brasie Corners,♂ N. Y., on Sept. 27, 1886, sent the following on the same subject:

I have 65 colonies of bees whose combs were built in the brood-chamber, on wired frames with only foundation starters from ½ to 1½ inches in width, fastened to the top-bar of the frames, and imbeded on the wires, the same as as full sheets should be. My brood frames are wired in the usual way, *i. e.*, perpendicularly, with brace wires. I use no comb guide, foundation excepted. The wires are drawn taut, the hive stands level, not tipping sideways so that the frames will hang perpendicularly, and I give the hive a pitch forward towards the entrance, from 1½ to 2 inches. I find the wires no nuisance to the bees; on the contrary I consider them a help in securing straight combs, and I would not dispense with them for any consideration. I wish it distinctly understood that I do not advise it in the second story or surplus department; there it would be sure to fail, as the combs are built too thick. Perhaps it is well to say that I use Hoffman-Langstroth frames, spaced 1⅜ inches apart from centre to centre, and No. 36 tinned wire.

Our Bee-Pasturage.—H. M. Cates, Shideler,⊶ Ind., on Sept. 5, 1886, writes:

This has been a very poor honey season, bees having swarmed but little. Many colonies did not swarm at all. Mine, that did not swarm, will average about 25 pounds to the colony. In looking over my new colonies I find them all short of stores, and will have to feed. There was the grandest white clover bloom I ever saw, but cold nights, I think, was the cause of there being no nectar in the flowers. There has been just enough honey coming in this fall to keep up late breeding. As a general thing bees are very strong in numbers. Our main honey source is white clover and basswood, the latter being a total failure this year; goldenrod is in abundance, but bees have not given any attention to it so far. As a general thing bees work on it from daylight until dark. I have a small patch of Alsike clover, and while the bloom lasted it was swarming with bees. I have two acres of sweet clover that will bloom next year. If these clovers prove to be a success, I shall sow more of them.

Must Feed for Winter.—O. P. Miner, Taylor Centre,⊙ N. Y., on Sept. 27, 1886, writes:

The honey season is over with us here, and not much surplus has been gathered. The dry weather reduced the yield from white clover, and basswood was a total failure. I commenced the season with 6 colonies, one of them very weak. I had only 3 natural swarms, and one I divided, making my number 10, now. I have received from them only 140 pounds of comb honey. Some in this section have done better, and others very much worse. One man, who has over 100 colonies, told me he would not receive over 5 pounds to the colony, and would have to feed 500 or 600 pounds of sugar for winter stores. I have introduced 4 Italian queens this season, and like them much better to handle than hybrids.

To any One sending us *one new* subscriber with his own renewal (with $2.00), we will present a copy of the new "Convention History of America."

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—For comb honey, we quote 12@13c. Extracted 6@7c.

BEESWAX.—23c.

R. A. BURNETT,
161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

McCAUL & HILDRETH BROS.,
34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Owing to more liberal arrivals the market for honey is lower' Best in 1-lb. sections, 12½13c.

BEESWAX.—23c.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—Extracted honey brings 3 1-2 @ 7c.; comb honey, 12 to 14c. for good to choice, in the jobbing way.

BEESWAX.—It is in good demand and arrivals are fair. We pay 20c. for good yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is good for all grades, and sales are large, while the supply is the same. Prices remain the same. One-pound sections, white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 9@10c.; ½-lbs., light, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5@5½c.

BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—We quote as follows: Choice comb in 1-lb. sections, 12@13; 2-lbs., 11@12½ cents; dark not wanted. Extracted, white, in kegs, 6@6½c.; same in tin cans, 6 1-2@7c.; dark in barrels and half-barrels, 5@5 1-2 cts.

BEESWAX.—No demand.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—We now quote 7@10c., as to quality wholesale.

BEESWAX.—It is dull, but buyers have to pay 22@23c. for choice lots.

SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Receipts are light and the market is very quiet. We quote: White extracted, 4@4¼c.; amber, 3¾c. Comb, 8½@10c. for white.

BEESWAX.—19@22c.

O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Dull at 21c. for prime.

Sep. 30. D. G. TUTT & CO., Commercial St.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 25
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 75
Canadian Bee Journal	2 00	1 75
The 6 above-named papers	5 50	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages) $1 00
" 100 colonies (220 pages) 1 25
" 200 colonies (420 pages) 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

National Bee-Keepers' Union.—There will be a meeting of the officers and members of this Society at Indianapolis, Ind., on Wednesday, Oct. 13, 1886, at an hour to be announced at the meeting of the North American Bee-Keepers' Society, to consider business of importance.

THOMAS G. NEWMAN,
General Manager.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

North American Bee Keepers' Society

The Chicago, St. Louis & Pittsburgh Railroad ("PAN-HANDLE ROUTE") take pleasure in hereby announcing to all delegates and their families desiring to attend the National Convention of Bee-Keepers' Union to be held at Indianapolis, Oct. 12, 13, and 14, that we have arranged to sell tickets to Indianapolis and return at $7.30 each on certificate signed by Mr. Thomas G. Newman, General Manager Bee-Keepers' Union.

Tickets good going Oct. 11, and returning up to and including Oct. 16.

Morning trains leave Chicago, from the Union Depot, at 8:30, reaching Indianapolis at 3:50 p.m. Evening train leaves at 8:30. Night train has through sleeping-car, and day train has through parlor-car to Indianapolis.

We can offer you superior accommodations and would be pleased to receive your patronage.

Tickets will be on sale in exchange for certificate at Union Passenger Station, corner of Canal and Madison Streets, Chicago, also at 65 Clark Street, corner of Randolph Street.

◆

The Monon Route to Indianapolis.

The Monon Route is the short line between Chicago and Indianapolis, and those desiring to attend the National Bee-Keepers' Convention, Oct. 12–14, should bear this in mind. The morning train leaves from the Dearborn Station at 8:35, arriving at Indianapolis 3:45 p.m. Evening train leaves at 7 30 p.m., and has attached elegant Pullman sleepers. Tickets good going Monday, Oct. 11 and returning up to and including Saturday, Oct. 16, will be on sale at Dearborn Station, corner of Fourth Avenue and Polk Streets, also at the city ticket office, 73 South Clark Street. For further information call or address E. O. McCormick, G. N. P. A., 73 South Clark Street, Chicago, Ills.

◆

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

Round Trip Tickets to the Convention.—As Manager of the National Bee-Keepers' Union, we have made arrangements with the Indianapolis lines of railroad for round trip tickets from Chicago to Indianapolis and return to Chicago, good from Monday to Saturday, Oct. 11 to 16, 1886, for $7.30. The fare one way is $5.50, and this is one fare and one-third. To obtain these tickets, it will be necessary to get a certificate signed by Thomas G. Newman, stating that the bearer is *entitled* to the reduced fare. Now, do not wait until you come to Chicago to get this certificate, for we may have gone before you come. Send for the certificate at once; and it will be sent by return mail.

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers before Jan. 1, 1887.

◆

"Cash in Advance" is the rule, but no longer than six months of grace can be allowed on the small sum of one dollar. Subscriptions may commence at any time, and discontinuances may be ordered at any time when arrearages are paid up.

◆

When Marketing Extracted Honey, it is a sad *blunder* to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

◆

We have made arrangements by which we can supply the Weekly AMERICAN BEE JOURNAL and the Monthly *Bee-Keepers' Magazine* for 1887, both periodicals for the very small price of $1.25, or the above and *Gleanings* for $2. Three bee-periodicals for the usual price of one!

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

◆

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

Advertisements.

FOR SALE.—25 Colonies of CHOICE ITALIAN BEES, in chaff-packed Hilton hives (shingle roof). Hives are new and first class; bees have enough stores for winter.—Will sell for **$6.00** per colony.
A. M. APTED, Grand Rapids, Mich.
40A2t

Honey For Sale.

We have a large quantity of the best white EXTRACTED HONEY, in 200-lb. Kegs, for sale, which we will deliver on board the cars at **8 cents** per pound. Orders solicited.
THOS. G. NEWMAN & SON,
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Prices Reduced.

THE "BOSS" ONE-PIECE

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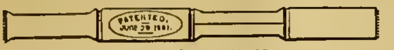
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WE have **REDUCED the PRICES** on One-Piece Sections as follows:

One-Pound Sections, In lots of **500 to 3,000, ℔ 1,000, $4.00**

☞ For larger orders write for prices. ☜

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., April 15, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to

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HEAD-QUARTERS IN THE SOUTH

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Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

Established 1857
BAKER & CO.
Satisfaction Guaranteed
DESIGNERS AND
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CORNER OF
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CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES.

BARNES' FOOT-POWER MACHINERY.

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 484 Ruby St., Rockford, Ill.

Established in 1864.

BEE-SUPPLIES

WHOLESALE AND RETAIL.

WE have the largest steam-power shops in the West, exclusively used to make EVERYTHING needed in the Apiary, of practical construction and at the LOWEST PRICES. Italian Bees, Queens, 12 styles of Hives, Sections, Honey-Extractors, Bee-Smokers, Feeders, Comb Foundation, and everything used by bee-keepers always on hand. Illustrated Catalogue FREE to all. Address,
31-35-39 **E. Kretchmer, Coburg, Iowa.**

Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,

DR. C. C. MILLER,
20Atf MARENGO, ILLS.

ONE HUNDRED

Large, Handsome and Extra-Prolific Select Tested Italian Queens $1.50 Each, or Three for $4.00,

By return mail. Safe arrival guaranteed. Make Money Orders or Postal Notes payable at Salem, Mass. Address, **HENRY ALLEY,**
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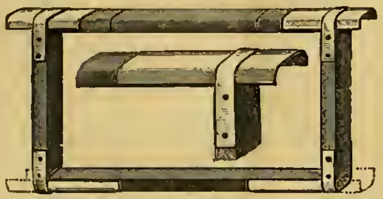
Metal Reversible Frame Corners.

ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.



Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made ⅞-inch unless otherwise ordered. **F. M. JOHNSON,**
WASHINGTON DEPOT, Litchfield Co., CONN.
32Atf

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf **J. VANDERVORT, Laceyville, Pa.**

FREE! New Book of Fancy Works with **100** Illustrations, **150** New Stitches, **10** Special Offers. **200** Picture Bulletin 48-col. story-paper, all for 4c postage
National Bazar, 7 W Broadway, N. Y.
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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

My 18 Annual Price-List of Italian, Cyprian and Holy-Land Bees Queens and Nuclei Colonies (a specialty): also Supplies—will be sent to all who send their names and addresses. **H. H. BROWN,**
15Etf LIGHT STREET, Columbia Co., PA.

Bees for Sale. 50 COLONIES of **Italians** in 11-frame Langstroth HIVES, with nearly all young Queens. Will sell at once at **$4 00** per Colony—as I am going to Nebraska. **L. ADAMS.**
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A CRISP and charming Monthly. Well edited, clearly printed, and pleasingly illustrated. **Prize Contributions.** Send stamp for sample, or better still send fifty cents and get the paper for one year. You will be amply repaid. Address,

DUGALD McKILLOP,
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BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

ATTENTION, BEE-KEEPERS!!

NOW is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates: 1 Queen, 80 cts.; 6 Queens, $4.50; 12 Queens, $8.00; 1 Tested Queen, $1.50; 6 Tested, $8; 1 Select Tested Queen, $2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, **Wm. W. CARY,**
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THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

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923 & 925 West Madison Street, CHICAGO, ILL.

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THE AMERICAN APICULTURIST

SENT one year, and a **Tested Italian Queen,** to each subscriber—all for $1.50. Sample copies free. Address,
30Atf **HENRY ALLEY, Wenham, Mass.**

Vandervort Foundation Mill.

6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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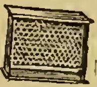
FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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923 & 925 West Madison Street, CHICAGO, ILL.

HOW to WINTER BEES.

THE October number of the **American Apiculturist** will contain essays on **"Wintering Bees,"** from the pens of **James Heddon, G. M. Doolittle, A. E. Manum, Prof. Cook, Dr. Tinker, J. E. Pond, C. W. Dayton, P. R. Russell, G. W. Demaree,** and other equally prominent apiarists. Every bee-keeper should secure a copy. For ten cents in stamps this number will be mailed to any address on and after Sept. 25. No specimen copies of this number will be sent out. Regular subscription price $1.00 per year. Specimen copies (of back numbers) will be sent free. Address,

AMERICAN APICULTURIST,
33A6t WENHAM, MASS.

WANTED, an active, reliable man in every city and town in the State of Illinois to work up Councils of the American Legion of Honor, an insurance organization now having 60,000 members, and we are willing to *pay liberally in cash* for services rendered in this work. It can be performed at odd and leisure hours without interference with regular business, and is an occupation affording much pleasure to those engaged in it. For full explanation how to go to work and what to do, address

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILLS.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,
Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, $1.00, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

☞ The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for $1.75.

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GREAT REDUCTION!

UNTIL January 1st, we will sell at a discount. Write for Reduced Prices.

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HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping Bathing, Working, etc.

IT TELLS ABOUT

What to Eat,
How to Eat it,
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Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear
Contagious Diseases,
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Headache, cause & cure,
Malarial Affections,
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IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GLASS PAILS

FOR HONEY.

THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	$1.60
" 2 pounds " "	2.00
" 3 " " "	2.50

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FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

10Aly **J. M. SHUCK,** Des Moines, Iowa.

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

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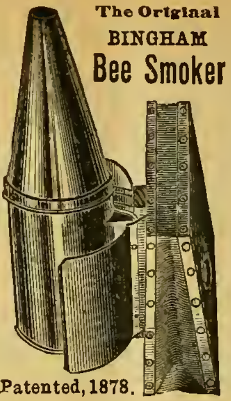
CHAS. F. MUTH & SON,
Freeman & Central Ave., - CINCINNATI, O.

P.S.—Send 10c. for Practical Hints to Bee-Keepers

RIBBON BADGES.

We have some ELEGANT RIBBON BADGES, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOS. G. NEWMAN & SON.,
923 & 925 West Madison Street, Chicago, Ill.



The Original BINGHAM Bee Smoker

Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last, I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

Bingham & Hetherington Uncapping Knife.

Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Snokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

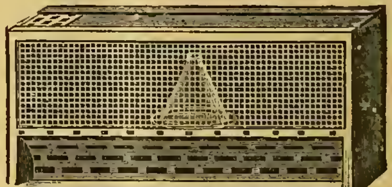
Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
15Atf **ABRONIA, MICH.**

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Oct. 13, 1886. No. 41.

Mother! Of all the words in our language, this is the holiest and grandest! To our minds, it presents the purest love, the most unfailing affection, and the tenderest care. The death of a mother severs the holiest tie in this world, and overwhelms the surviving family with sorrow. This is the case to-day with the editor of this JOURNAL. His mother has just passed to the "haven of rest" after 86 long years of toil and sorrow; having spent just one-half of her years (43) as a widow. She died at Kent, Portage County, Ohio, on Thursday, Oct. 7, 1886, and was there buried last Sunday. Death in this case was not unexpected, for our mother has been awaiting the angel's call for many years—and now, she has gone only a few years before us. We are all following one another to the tomb—and soon our time will come. Our faith and hope lead us to look for a re-union on the other shore of all the loved-ones who have gone before us, for

"Part of the host have crossed the flood,
And part are crossing now."

◆

A Company has been organized to be known as "The International Honey Co.," whose intentions are to establish apiaries in Cuba, the United States and Canada. They have accordingly made all arrangements to sail from New York on Oct. 14, for Cienfuegos, Cuba, with everything necessary for the equipment of a first-class apiary, at which place they intend to locate and establish a large apiary during the coming winter. During the summer season, when the bloom of Cuba does not yield nectar in sufficient quantities to render the business profitable in that island, they intend to come north (where they already have one apiary), and locate their next in Middlesex Co., Ontario. The Company is composed of A. T. Finn, H. E. Hill and R. M. Muller. In this they calculate upon obtaining good results by having a honey-flow the whole year around. They will report the result of the experiment in the BEE JOURNAL in due time.

The Canadians in London, who have charge of the Canadian honey at the "Indian and Colonial Exhibition," are being received with open arms by the British apiarists. On Wednesday, Oct. 6, at 2 p.m. the British Bee-Keepers' Association had a luncheon, at which the Colonial bee-keepers were their guests. They all visited the Colonial exhibit of honey in a body, and at 5 p.m. held a conversational meeting. Mr. J. M. Hooker, in the *British Bee Journal*, thus describes the exhibit and exhibitors:

> About 40 tons of Canadian honey have arrived at the Exhibition, and are now being unpacked, and will be all in order by the end of this week.
>
> There are four gentlemen who are delegated by the Ontario Bee-Keepers' Association to see to the whole thing, and right well they appear to be doing it. Our old friend Mr. D. A. Jones, of Beeton, is one, Mr. Corneil, of Lindsay, Mr. McKnight, of Owen Sound, and Mr. Pettit, of Belmont. By accident I met Mr. Jones, who introduced me to the others; they represent different parts of Ontario, living over a hundred miles one from the other. I spent part of last Thursday afternoon with them, seeing them unpack some of the comb honey, which you will be pleased to hear has come with few breakages. There are 15 tons of comb honey of very good quality, principally clover honey; the packing was very cleverly done, and has well repaid them for the great care and skill bestowed upon it by the result. They were most courteous to me, and gave me every information, and look forward to making the acquaintance of some of our fraternity. All bee-keepers should make a point of seeing this grand exhibit.

We congratulate our Canadian friends upon the success attending their adventure.

◆

Death interferes with everything, and will in all probability interfere with the editor's arrangements to be at the Indianapolis Convention on the first day. He will be there, however, as soon as he can return from the East, whither he has been summoned by telegraph to attend his mother's funeral.

◆

Red Clover Honey has been gathered quite freely in many localities this season. It is quite thick, having considerable body, but the flavor is not nearly as good as that from white clover, while the color is darker than the amber honey from fall flowers.

◆

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

◆

Exactly So!—The *American Apiculturist* for November contains the following offer:

> The AMERICAN BEE JOURNAL is the best weekly bee-paper published in the English language. Price, $1 per year. If any new subscribers to the *American Apiculturist*, or those who renew or desire to take the Weekly BEE JOURNAL, we will send both papers for $1.70. The above offer is to commence with the November number of the *Apiculturist*.

Of course we will make the same club rate for the two papers, when sent to this office. The change in management has resulted in an infinite improvement in the tone of the "Api." We wish it success.

Bee-Keepers have themselves to blame for many of the "mistakes" now so commonly made when speaking of matters concerning the pursuit of bee-keeping. An extensive advertiser for years persisted in calling comb foundation by the mistaken cognomen of "artificial comb;" thus giving the only plausibility to the "scientific pleasantry" of Prof. Wiley. Others talk and write about bees *making honey*, when they know full well that they simply gather what is already made in the blossoms by Nature. In the *Prairie Farmer* Mrs. L. Harrison makes a good point on the latter in these words:

> A person would suppose, by reading Mrs. Lizzie E. Cotton's advertisement, that her hive *made* honey, instead of the bees gathering it. All this fuss and feathers about bees producing more honey in *my* hive than in yours, is all moonshine. Elisha Gallup once said very truthfully, that "other things being equal, a colony of bees will build as much comb, and produce as much honey in a nail-keg as in any hive, and they will produce as much honey in my nail-keg as in yours." This is one of the axioms of bee-lore, that bees will store as much honey in a hollow tree, log-gum, salt barrel or box-hive, as in any controllable or reversible hive made.

Movable frame hives give ease and comfort in manipulation, and sections in which honey is to be stored only enhance its market value.

The *Bee-Keepers' Magazine* for October contains the following:

> We see *City and Country* still publishes that advertisement of Lizzie E. Cotton, who is a fraud, though we sent them a marked copy of the magazine containing our article upon her workings. It is rather anomalous to see the advertisement of a prominent Bee Journal on the next page to hers (or his). We should think the ads. would fight.

The Bee Journal mentioned is the AMERICAN, and the point is well taken. The publishers of *City and Country* are imposing on us by inserting Lizzie's advertisement when they ought to know that she has been repeatedly published as a *fraud* by every reputable bee-periodical in America.

◆

Some Gross Libels on bee-keepers appeared in the Rochester, N. Y., *Morning Herald*, of July 13, 1886. A man by the name of McDowell, who had an experience of a few weeks in keeping bees, was stated by that paper to be "an expert apiarist," and is responsible for this remark:

> Rather sharp practice is employed by some bee-keepers, who place glucose near their hives and allow the bees to draw from it instead of from the natural source. This enables the bees to fill their combs quickly, and produces a bluish white honey which is more pleasing to the eye than flower honey.

This statement is damaging to bee-keepers of that locality, and we wrote the editor to correct it; but it has not been done. We now therefore publicly call upon Mr. McDowell either to prove his assertion or to "take it back," in the *Herald*. We ask no favors—all we want is justice.

◆

J. R. McLendon, Stoddard, Montgomery County, Ala., wishes to correspond with all the bee-keepers in Alabama relative to organization, and requests every one in that State, to send him a postal card, giving name and address. Now let Alabama be heard from with a strong society of bee-keepers.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Rearing Queens.

Query, No. 321.—1. If queen-cells are inserted in colonies about Sept. 10; will the young queens lay that year? If not, when will they lay? 2. Would it be better to wait until the next spring before inserting queen-cells?—E. & W.

You had better wait until spring, in our locality.—DADANT & SON.

1. In all probability they will lay in the fall. If they do not they will probably be worthless. If the cells are good ones I would put them in in the fall.—W. Z. HUTCHINSON.

1. It depends mainly upon the locality. If in this locality, no; if farther south, probably they would. 2. I should prefer to do it in August, about the 5th to the 10th.—G. M. DOOLITTLE.

1. It will depend upon the length of the season and the quantity of flying drones; but probably they would not. 2. Yes, most certainly. If the old queens are failing, the best plan is to insert young fecundated queens at once.—J. E. POND, JR.

1. In my locality I would not do it. If I should, some of them, perhaps most of them, would lay that year, but I should not count on them being the best of queens. Of the balance a few would lay the next spring; the majority, never. 2. You had better wait until the honey harvest.—C. C. MILLER.

Much depends upon the season. If they did not lay the same year, they would next, if they became fecundated the same year as hatched. I would strongly urge postponing the entire work till 1887.—JAMES HEDDON.

I should say it was too late here. We usually have frosts by Sept. 15, after which work with bees is not desirable. I prefer to rear queens when bees are active. Again, we might not have any drones so late; very frequently we do not.—A. J. COOK.

You can insert your cells at the above time if you have drones to fertilize the young queens. If fertilized, they will lay the same fall, if in the South; but if in the North, they may not lay before the next season.—J. P. H. BROWN.

Yes, but the plan suggested is not a practical one, as more than half of the cells will be torn down and the bees be left queenless. The proper way is to take out the queens, and in nine days cut out all the queen-cells. Then introduce a small piece of comb with just hatching brood from the best queen, and there will be no failure and no great trouble. It is the best way to change all inferior stock.—G. L. TINKER.

If you have plenty of drones and some honey is being gathered, you will succeed very well in September. I much prefer to have good queens in the hives when spring opens. If the young queens are mated in the fall, they will be all right whether they lay in the fall or not.—G. W. DEMAREE.

Not knowing your locality I cannot say, but in my locality (Southern Michigan) I should prefer to wait until spring.—H. D. CUTTING.

Best Capacity of Brood-Chambers.

Query, No. 322.—How many frames of the Langstroth size should the brood-chamber contain to give the queen sufficient room, get the most honey, and least increase, or most honey and money?—Ontario.

Eight would be my choice.—G. M. DOOLITTLE.

From ten to twelve.—DADANT & SON.

Through the honey harvest perhaps not more than six.—C. C. MILLER.

This varies with queens. I think eight frames enough. Ten are certainly sufficient.—A. J. COOK.

In my locality ten frames gives the best results as a general thing.—G. W. DEMAREE.

If you work for comb honey, eight or nine frames are sufficient; but if for extracted honey, I would advise ten to twenty.—J. P. H. BROWN.

With an invertible hive seven frames will give the queen ample room, and get the most honey and money. It will depend upon the management, however.—G. L. TINKER.

It depends upon the queen. I would have the brood-nest of such size that an ordinary queen could keep it full. I prefer eight combs in the spring, and five the rest of the year. With a large brood-nest there is less swarming. I get the most surplus with a small brood-nest.—W. Z. HUTCHINSON.

When I knew no better way than to keep the brood-chamber one size all the year around, I used and preferred the capacity of eight Langstroth frames; but with the new system of horizontal contraction and expansion, reduced to quick, practical manipulation, I use and prefer the capacity equaling ten Langstroth frames for about one-fourth of the year, and half of that for the other three-fourths; or there-abouts, according to circumstances too numerous to mention here.—JAMES HEDDON.

Mr. Langstroth decided upon ten frames, and my own experience proves to myself that he is right. It is, however, a question of locality and method of management.—J. E. POND, JR.

This is one of the many undecided questions of the day. Locality makes a difference, and the manner of working and securing honey a great difference. Some want six, others seven or eight, while others want only half the capacity of eight.—H. D. CUTTING.

Fall Honey for Winter Stores, etc.

Query, No. 323.—1. Is fall gathered honey safe or not for winter stores? If not, why? 2. In what way or manner does cold add to the danger of wintering?—A.

1. I regard it perfectly safe. 2. In the latitude of Augusta, Ga., the coldest weather has no injurious effect upon bees if they have plenty of stores.—J. P. H. BROWN.

1. It is usually. It is not safe in a wet season, if it has not been thoroughly ripened. The floating pollen may make it more unhealthy also. 2. In my experience it is; I have never found it to injure my bees, and have always used it; the essential point is to have the honey well ripened.—J. E. POND, JR.

1. I consider it safe. 2. It causes the bees to consume much honey as fuel, and debars them from frequent flights, as nature requires where much honey is consumed.—G. M. DOOLITTLE.

1. If it is not safe it is probably because it contains considerable nitrogenous matter. 2. It confines the bees to the hive, and increases the consumption of honey.—W. Z. HUTCHINSON.

1. Fall-gathered honey is perfectly safe for winter stores for my bees. 2. Protracted cold is a condition unfavorable to healthful exhalation from the bodies of the bees, and is likely to bring about a dropsical affection dangerous to the lives of the bees. The greatest danger from protracted cold in this climate is, it sometimes prevents the bees from reaching their stores, and starvation is the result.—G. W. DEMAREE.

1. I consider fall honey as safe as any, one year with another. 2. A low temperature compels activity, and this causes waste of tissue, and this calls for nitrogen, which induces the bees to consume bee-bread, and this loads the intestines, and the bees, unless able to fly and void, become sick.—JAMES HEDDON.

1. All honey gathered from *flowers* is safe for winter stores, if it is well ripened. If gathered late and left thin it is not. 2. Cold tends to cause bees in winter confinement to become uneasy or restless. I think it would affect bees about the same as it would a thinly clad man on a cold winter night. If he did not bestir himself he would get into trouble, and so with

the bees. Restless bees soon become worn out, suffer rapid waste of tissue and loss of vitality. Increased consumption of food may repair the waste, but not the loss of vitality. Nor is their relief in frequent flights. For half the winter bees must remain in a torpid condition to winter well.—G. L. TINKER.

1. Some of it is, and some is not. In general, I think it is. To the other rather strange part of your question I might reply, because they do not winter safely on it. 2. I suppose for one thing it is a tax on the vital energies, the same as on the human system; and besides it induces a greater consumption of food, thus distending the digestive organs; but after all I do not know much about it.—C. C. MILLER.

1. If good honey, I think it is just as good. A year ago last winter I removed all early gathered honey and gave a number of colonies only fall honey. All the colonies wintered excellently well; yet many bees died all about me. I believe real honey from flowers is all right, no matter when gathered. 2. It irritates bees, causing them to exercise and feed without the possibility of flight.—A. J. COOK.

Convention Notices.

☞ The Wabash County Bee-Keepers' Association will meet at Wabash, Ind., on Oct. 23, 1886.
AARON SINGER, *Sec.*

☞ The Sheboygan County Bee-Keepers' Association will meet at Chandler's Hall, at Sheboygan Falls, Wis., on Saturday, Oct. 16, 1886, at 10 a.m.
MRS. H. HILLS, *Sec.*

☞ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. BALDWIN. *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Southern Illinois Bee-Keepers' Association will hold its next meeting at Benton, Ills., on Thursday, Oct. 21, 1886. F. H. KENNEDY, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet at Stuart, Iowa, on Saturday, Oct. 16, 1886. All interested in the busy bee are requested to be present. J. E. PRYOR, *Sec.*

☞ The Semi-Annual meeting of the Central Michigan Bee-Keepers' Association will convene in Pioneer Hall, in the Capitol Building, Lansing, the third Tuesday of October, at 10 o'clock, a.m.
J. ASHWORTH, *Pres.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Nov. 24 and 25, 1886.
J. M. HAMBAUGH, *Sec.*

☞ All are respectfully invited to attend the next meeting of the Bee-Keepers' Association of Eureka Springs, which will be held at Eureka Springs, Ark., on Oct. 23, 1886. Business of importance to every bee-keeper Northwest Arkansas will be before the meeting.
DR. S. S. PURCELL, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

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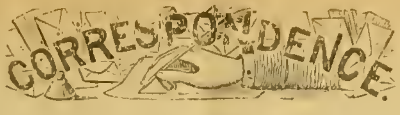
Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.



Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O→ east; ←O west; and this ♂ northeast; ⌐O northwest; O⌐ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Display at the Provincial Exhibition.

WM. F. CLARKE.

The Provincial is the most important agricultural exhibition in Canada. It embraces the entire province of Ontario, and is managed by an association to which the Government makes a grant of $10,000 a year. It is a peripatetic institution, and is held at Ottawa, Kingston, Toronto, Hamilton, London, and Guelph in rotation. This year it was at Guelph, and it has made no small stir in our little city. The exhibition as a whole was exceptionally good, especially in the horse, cattle, and implement departments. The Provincial does not offer so tempting a prize-list for honey and apiary supplies as the Toronto Industrial, hence the competition is to a large extent local. There is a jealousy between the officials of these two organizations growing out of the rivalry between them, and as Mr. Jones has from the first been a leading spirit in the Toronto Industrial, I think he does not show at the Provincial. At any rate he did not this year. It must be acknowledged that the Toronto Industrial shows a far higher appreciation of bee-keeping than the Provincial. It appropriates a whole building to this department, while at the Provincial honey is dumped in with cheese, butter, sugar, bacon, cured meats, maple syrup, domestic wines, and a lot of sundries. Bee-keepers generally are "down" on the Provincial, for not encouraging their industry more liberally. They do not refuse to exhibit, but their "best licks" are put in at the Toronto Industrial.

This year there was a better display of honey and apiarian supplies at the Provincial than usual. The old nondescript hive which has raked in the prize from time immemorial was left at home, and the Langstroth, Blackburn, Shuck, Chataqua, and other hives made up quite a variety. E. L. Goold & Co., of Brantford, had a large and showy collection of apiarian supplies in charge of Mr. R. F. Holterman, conspicuous among them being the Stanley automatic extractor in the sizes.

Mr. R. L. Meade, of Nassageweya, had the largest display of honey, comprising about 2,500 pounds of extracted, and 500 pounds of comb. It was the general opinion that he was entitled to the first prize on both extracted and comb, but his extracted was all in tins varying from one pound to fifty, while Sanders & Co., in addition to an assortment of tin packages, had a lot of very tasteful glass packages. In consideration of the extent and excellence of his display, he was awarded a diploma. The undersigned took first prize for honey in the comb not less than 10 pounds, for two reasons: first, use of tin separators, and second, removal of sections as soon as finished, so that they retained their snowy whiteness. Of these two points let all intending exhibitors make a note.

The last two days of the Fair were very warm, and some of our exhibitors having embarked in selling honey in quarter sections to be eaten on the spot, as a natural consequence bees from adjacent apiaries were attracted in large numbers, until every lunch stand and confectionery stall swarmed with them. I did not hear of any complaints of people getting stung, for it is astonishing how strictly bees attend to business under such circumstances, gathering what little sweet they can regardless of surging crowds of people. But it started the enterprise of robbing among our city bees. The day after the exhibition closed the bees made a diligent search for the lost show, only to find here and there a lady making jelly or preserves.

In the afternoon, a bright little boy came in hot haste to my house, exclaiming, "Mr. Clarke, haven't you lost a swarm of bees?" "No, sonnie." "Well, there's about a thousand at Mrs. J's, and she wants you to come and fetch 'em home right away." "I can't do that," I replied, "I might be stealing. I do not know whose bees they are. Some of them are mine, no doubt, but I couldn't pick them out from the rest, and I wouldn't like to take any bees that don't belong to me. Tell Mrs. J. to leave the door and windows of her kitchen open till dusk. The bees will all go home to their proper owners. To-morrow (Sunday) she wont be making jelly, and she can keep the door and windows shut." To-morrow, happily, was cool and wet, so "the plague was stayed."

I subjoin a list of prizes and prize-winners:

Best display of extracted honey in marketable condition, Sanders & Co., Guelph, $10. J. R. Morrison, Guelph, $5.

Best display of honey in the comb and in marketable condition, R. L. Meade, Nassageweya, 1st and 2nd prizes, $10 and $5.

Best honey in the comb, not less than 10 pounds, Rev. W. F. Clarke, Guelph, $8. R. L. Meade, $6. F. M. Benham, $4.

Best jar of extracted honey, A. Gilchrist, $4. J. H. Welsh, $2. F. McIntyre, $1.

Best beeswax, not less than 10 pounds, J. R. Morrison, $3. R. L. Meade, $2.

Best bee-hive, R. L. Meade, $3. E. L. Goold & Co., Brantford, $2. Rev. W. F. Clarke, $1.

Best wax-extractor, E. L. Goold & Co., diploma.

Best honey-extractor. E. L. Goold & Co., diploma.

Best and largest display of apiarian supplies, E. L. Goold & Co., silver medal.

Guelph, Ont.

For the American Bee Journal.

Marketing Honey—Feeding Sugar.

G. A. BRUNSON.

I have been an observer of the course of bee affairs and interests for some years, and I have come to the conclusion that bee keepers give the profits of their enterprise to the retailer, as I have learned that the consumers pay 20 cents per pound to the grocers in Chicago for the same honey that I sell at home for 10 cents. This exorbitant retail price exacted by the grocers for honey in our large cities, limits the sale of our produce to a few who have money for luxuries. This class of purchasers are in such a minority compared to the number of honey lovers, that the market in our large cities is easily overstocked; hence our cheap wholesale prices.

I notice in the address of Mr. S. C. Gridley, on page 582, a plan which I think if followed out would be of untold benefit to the bee-keepers of California, and not only that, but a like system in other central localities, or chief commercial centres of the United States would be a great benefit to the bee-keepers—a place where they could ship all their surplus over home consumption, to some warehouse where it would wait its turn and not have to be sold at a sacrifice in order to get rid of it, as we have heard of parties who have large quantities, getting scared by market reports, or not knowing where to ship or what to trust. Such bee-keepers sacrifice on a large quantity, killing the market for all others the rest of the season.

There is the item of feeding sugar, which we bee-keepers, I believe, are apt to look at in the wrong light. My observations have been that for every pound of sugar the bee-keeper buys for feeding bees, throws one pound of honey out of the market. Sugar is an inferior food for bees, and often costs more per pound than fall honey can be sold for; and if the apiarist has been feeding a large quantity of sugar, he will have all the more fall honey to crowd on the home market, or to sacrifice on in a foreign market, or perhaps carry over until another year. Then he will see that he is out just what he paid for sugar, and the sale of an equal number of pounds of honey that nobody wants.

I found myself in about the same predicament the past summer, as my old dark honey weighed about the same as the amount of sugar I had fed the fall before, and now I feel quite sure that I will not feed any more sugar as long as I have the dark honey; but I shall follow the course I did this season, as near as I can, and that is, to take off the supers of white honey before the fall or dark honey is brought in, and not put on any more supers until the hives are heavy enough for winter, then put on the supers if more room is needed, and take whatever they put in for my share of that season's crop.

By the above plan it is easy to be seen how we can prevent the buying of sugar or feeding honey, and have our colonies heavy for the coming winter, with nice capped stores, as they seem to cap it better when they bring it from the fields than when it is fed to them.

Plymouth, Mich.

Canadian Bee Journal.

Subsoil vs. Jones.

S. CORNEIL.

A case against a bee-keeper tried at sea, and successfully defended without aid from the Manager of the Bee-Keepers' Union.

On Board S. S. Sardinian,
North Atlantic, Aug. 26, 1886.

Bee-men are noted for being ready to talk about their specialty on every possible occasion; the delegates in charge of the Ontario honey exhibit at the Colonial and Indian Exhibition are no exception to the rule in this respect. Conversations with their fellow passengers on board were often turned so as to bear a reference to bees and honey. Should a passenger tell a story about the methods by which travelers are often blackmailed, Mr. Jones would match it by telling how he got even when the custom house officers and boatmen at Beyrout attempted to levy "backsheesh" on him when bringing bees from the Holy Land to Cyprus. One of his cylinders was so full that he feared the bees would be suffocated. Pretending to abandon the bees rather than submit to their demands, which amounted to about $25 for two hives, he opened this hive and allowed about a gallon of bees to escape. This caused a general stampede, the bees driving both boatmen and officers under cover. He then deliberately placed his bees in a boat and rowed to the steamer, which had been waiting for him half an hour, the owner of the boat lying in the bow with his head covered most of the time. Before long the Canadian bee-men on board were the best known among the passengers. Their statements regarding the benefit of bees in fertilizing the crops of the agriculturist, and the virtues of honey as a food and medicine, were not always allowed to pass unchallenged. The outcome of the opposition was that Capt. Hamilton, manager for a shipping firm in Scotland, over the assumed name of "Subsoil," made a demand in writing upon Mr. Jones for $1,000 for damages done to his pastures by Jones' bees in extracting the honey from the clover, and for annoyance to his family from the stings of the bees, and loss of property caused by the bees stinging his sheep and cattle. Mr. Jones refused to accede to any such demand, stating that the bees were not only not injurious, but were a positive benefit to his neighbors' pasture. Here was a direct issue. Arrangements were soon on foot for the organization of a court to try the case.

Capt. Smith, of the "Sardinian" was consulted, and he fell in with the idea at once, expressing his willingness to go into the witness box himself and testify against Jones. Soon the arrangements were all complete. Mr. Dennistoun, of Edinburgh, Scotland, arrayed in a fur cloak and ample wig, made by the boatswain for the occasion, filled the position of judge with dignity and ability. Mr. S. Carsley, a leading merchant of Montreal, acted as counsel for the prosecution, and Mr. R. McKnight, registrar for North Grey, Ont., acted as counsel for the defence. Mr. Andrew Allan, of Allan Bros. & Co., Montreal, was chosen as foreman of the jury. Amongst the jurors were a gentleman recently from Hong Kong, China, an editor from London, a banker from Ontario, a stock raiser from British Columbia, and another from Manitoba, and a gentleman from Stratford, England.

Mr. Carsley, in opening the case for the prosecution, stated in a clear and succinct manner that his client's land produced the clover blossoms which supplied the defendant's bees with honey, that the secretion of honey in the clover-heads increased the food value of his client's pasture, or it would not be there; that since the defendant established his bee-farm in the neighborhood his client's stock had been failing; that his cows gave less milk and of poorer quality than formerly; that his sheep were poor, and, therefore, less valuable; and that his client's family required medical assistance more frequently than they did previous to the establishment of the defendant's bee-farm. Since these losses were directly traceable to the defendant's bees, he claimed that it was only just that defendant should remunerate his client to some extent for the damages he sustained. Evidence was produced to sustain this contention. Great merriment was caused by Capt. Smith, who as Hodge, a servant of the plaintiff, testified that his master's stock were failing of late; that this was caused by Mr. Jones' bees, and not by carelessness, especially since he took charge; that on one occasion he took Miss Buttercup, the dairymaid, out for a drive with his master's horses and carriage, that one of Jones' bees attacked the "hosses" causing them to run away and break the carriage; that he captured that bee to show to his master, and that it was about 2½ inches long, and was one of those Eastern bees Jones brought from somewhere. This evidence was confirmed by that of Miss Buttercup. The counsel for the defense, in cross-examination, labored unsuccessfully to induce her to admit that at the time the accident occurred

Hodge was not minding his horses, but had his attention otherwise engaged.

The ship's surgeon was called and testified that the family of Mr. Subsoil had required his assistance more frequently than formerly; that he was often called upon to prescribe for hives and erysipelas, resulting from bee-stings. He admitted on cross-examination that Subsoil's family had increased rapidly of late, which would to some extent account for his being more frequently called in. The counsel for the defense proceeded to question him as to facts not brought out in his examination in chief. This was objected to by the opposing counsel. His lordship held that the objection was well taken, but in view of the fact that this was the first case of the kind which had come before the courts, and of its importance to the public, he would allow counsel some latitude in order to get all the facts before the jury. The witness then stated that as in animals the lacteal fluid is only secreted so long as there is a demand for it, so in the vegetable kingdom the blossoms secrete nectar as long as it is needed to attract insects, and that it is replenished as fast as it is gathered. The witness stated further that honey ranks high among the sugars as an article of food because it is already partially digested by the bees, and is in a condition to be at once taken up by the absorbent vessels of the stomach and assimilated, while cane sugar and the starches of potatoes and bread require to be first changed by the saliva and pancreatic juice into glucose before they can be assimilated and passed into the circulation. He also stated that honey has important medicinal properties.

For the defense Mr. S. T. Pettit was the first witness called. He stated that he owns and manages a farm of 150 acres, on which he keeps over 100 hives of bees, about 15 milch cows, and from 20 to 30 sheep. The records at the cheese factory show that his cows gave at least as much milk as do those of the other patrons whether there are bees in their vicinity or not, and that for richness his milk stands amongst the very highest. His Southdown sheep have for years taken most of the leading prizes at the local shows, and he has always shown them off the grass and has not fed grain. He has frequently observed that his crops of clover seed and buckwheat are far in excess of those of his neighbors, who are three miles or more from bees, although the other circumstances were at least as much in their favor.

Mr. S. Corneil gave evidence to the effect that in the vegetable kingdom there is a constant struggle for the survival of the fittest, that the weak specimens are crowded out by the stronger, and that the strongest and most perfect plants can only be secured by cross fertilization; that the methods resorted to by plants to secure cross fertilization are often curious and interesting, amongst which are bright colors in the blossoms, strong odors, and the secretion of nectar to attract insects, which carry the pollen from flower to flower; and that the constituents of the nectar are not drawn from the soil, as is often supposed, but are absorbed by the plant from the air. In reply to counsel, he stated that a certain number of clover heads were covered with gauze to protect them from insects, that the seeds of these and the seeds of an equal number of heads unprotected were counted, and that the seeds of the latter were as three to one of the former. Witness continuing, said that Chas. Darwin had made the apparently bold statement that the crop of clover seed depended, in a measure, upon the number of old maids in the country, because old maids were proverbially fond of cats; the more cats the fewer field mice. The queen humble-bee hibernates through the winter in the nest of a mouse better than anywhere else, and as a rule they are the only bees whose tongue is long enough to work on red clover, so the fewer mice the fewer deserted nests, and therefore the fewer humble-bees to fertilize the crop of the next season. The witness had learned from his lordship the bishop of Rupert's Land, who was a passenger on board, that in the city of Winnipeg, where there are few bees, he had to fertilize the blossoms of his melon vines by hand or he would have little or no fruit.

In cross-examination the witness stated that Darwin was a very close observer, that while it was true that farmers dealt with facts, men like Darwin often discovered the facts which the farmers applied, and although the plaintiff only raised clover and not clover seed, if it were not for insects it would be a question of only a very short time till there would not be a pound of clover seed to be obtained.

The defendant was called and testified that 100 colonies of bees would exhaust all the bee-pasturage in 25,000 acres in a poor season, that as Mr. Subsoil only owned 200 acres, and wanted $1,000, there would be 125 farmers claiming damages amounting to the sum of $125,000. Consequently if Mr. Subsoil's claim were valid, bee-keeping would become an extinct industry.

So much interest was taken in the case that the court held three sessions before the trial was brought to a close. His lordship, the Bishop of Rupert's Land, was present during the whole trial, and manifested a lively interest in the issue.

The counsel for the plaintiff reviewed the evidence and appealed to the jury to do justice to his client. Throughout the trial Mr. Carsley showed marked ability as an amateur counsel.

Mr McKnight addressed the jury in an eloquent speech of over half an hour's duration. He reviewed the evidence for the defense, dwelling especially upon the point that where there were no bees, melon vines had to be fertilized by hand to secure a crop, "and," said he, "for the privilege of saving Mr. Subsoil this labor my client is asked to pay $1,000." Instead of bees and stock being antagonistic, he alluded to the fact that while the land of Canaan was preeminently a grazing country its caves were also full of bees, and the country was referred to in the sacred writings as "a land flowing with milk and honey."

The judge summed up the evidence and charged the jury in dignified and appropriate terms. After a short consultation the jury brought in a verdict for defendant. Counsel for plaintiff gave notice of an appeal. All admitted that many interesting and valuable facts were elicited, and that the trial contributed to the enjoyment of the passengers during a pleasant voyage.

[Mr. Corneil introduces the above by stating that it was a case "successfully defended without aid from the Manager of the Bee-Keepers' Union." True; but it was out of his jurisdiction—on the high seas—and a bogus case, at that! However, some capital points were made, as will be noticed by the reader. We are glad our Canadian friends were so jolly on their voyage.—Ed.]

For the American Bee Journal.

My Experience with Bees.

DAVID WILCOX.

Ten years ago I bought a small box-hive of bees, thinking to have some honey which would be easier produced than bought. In course of time I found a frame hive the best, and many other things I knew nothing about, until now I have 90 colonies, and supplies accordingly. I have also learned that fixtures cost money, with trouble and time to get them, which weighed heavily on the income from the bees. I had water power offered me for $3 per month sufficient to work lumber and make my hives, etc., but as that would take me away from home and the care of the bees, I bought a wheel of about 400 pounds weight, hung upon rollers with treadle and small saws attached, so that my work was at home, and I could see to the yard and farm at the same time. Eighty or 90 square feet of lumber will make almost any kind of a hive, except the surplus arrangement. For whatever hive is preferred, take the measure of each piece, and cut lumber to match; when nailed and painted the hive is complete.

The past season has been very poor in this locality. In marketing honey I take from 100 to 500 pounds on an express wagon or sleigh, and go until it is sold. In almost every place there can be found those who are glad to keep a man for honey, and that reasonable. I disposed of 2,000 pounds in this way last year. I extracted 170 pounds from unfinished sections (last year) which sold in glass jars more readily in some towns than comb honey.

As I have been sick and unable to leave the house for a few weeks, I cannot report about this year's crop. Taking all things into account, bee-keeping is as profitable as farming, and to me much more pleasurable, knowing from experience that one can commence small and grow up with the business, or let the business grow up with him.

Many of the suggestions of the BEE JOURNAL are valuable, and must be an encouragement and help to all. I find myself following many of them.

Orford.⊙ N. H., Oct. 1, 1886.

For the American Bee Journal.

The Illinois Central Convention.

J. M. HAMBAUGH.

Owing to a very enthusiastic gathering of the old war veterans and members of the Grand Army of the Republic. as well as citizens in general at Quincy, Ills., Oct. 19, 20 and 21, 1886 at the laying of the corner stone of the Soldiers' Home, the executive committee of the Illinois Central Bee-Keepers' Society have concluded to change the date of its meeting at Mt. Sterling, Ills.. from Oct. 19 and 20, 1886, as heretofore published, to Nov. 24 and 25, 1886. We hope that those interested in the cause, will take pains to make public the change. and do all in their power to make the meeting a success.

Quite a number of prominent bee-keepers have signified their intention to be present, and each day brings additional evidence that the meeting will be one of unusual interest. The programme has been culled from a list of the most practical and instructive topics, and the query-box will be full, varied and interesting, and we solicit those who cannot be present, to send us by mail their queries which will be respected and placed upon the list. We append the following programme:

FIRST DAY—WEDNESDAY.

Forenoon Session, 10 a.m.—Convention called to order. Address by President Wm. Camm. Calling the roll of members. Payment of annual dues. Call and reception of new members. Reports of Secretary and Treasurer. Essay. "Reversible frames and reversible sectional brood-chambers, and hives—are they a valuable acquisition to bee-culture?" by C. P. Dadant, Hamilton. Ills.

Afternoon Session, 1:30 p.m.—President's annual address. — Essay, "Hives, frames and sections," by the secretary. Jos. M. Hambaugh. "Shall we use separators. if so what kind?" by J. G. Norton, Macomb, Ills. "Economy of supply and demand," by John Bush. Murrayville. Ills. Queries. Adjournment.

SECOND DAY—THURSDAY.

Morning Session. 9 a.m.—Communications. Essays: "Different races of bees," by President William Camm. "Marketing honey — best methods. how and when," by W. J. Cullinan. Mt. Sterling. Ills. "Introducing queens," by Thomas S. Wallace, Clayton, Ills. Queries.

Afternoon Session, 1:30 p.m.—Receiving members. Election of officers. Miscellaneous business. Essay: "The wintering problem," by W. T. F. Petty, Pittsfield, Ills. Gratuitous queries. Explanation of articles on exhibition; criticisms, etc.

Spring,⊸ Ills.

For the American Bee Journal.

Plain Sheets of Wax and Drone-Cells.

L. J. DE SOBOTKER.

My experience with plain wax-sheets is as follows: When comb foundation came into use years ago, I was running an apiary in one of the West India Islands, and I sent for some foundation, and received wired, flat-bottom foundation, which was very badly printed with cell figures scarcely perceptible, but all worker cells. I put it in unwired frames, and made the allowances all around the side and bottom-bars, and gave it to pretty strong colonies, and the bees worked it up into good worker-cell combs; but on several of them there was a small space occupied with drone cells, especially upon those worked up in the hives that had queens between 2 and 3 years old, and in the hives that had queens from 1 to 1½ years old the comb was all worker cells; this gave me the idea to try a few plain sheets of wax. I did so in both old and young queened colonies, and found the same result as from the badly printed sheets, with this difference, that the bees worked very reluctantly, in fact unwillingly, upon them, taking as much time to do it as they would have required in natural comb, and, as far as I could observe they had to add material to them of their own make. I then tried a few strips of it from 2 to 4 inches wide, and they built worker cells on them. but they became honey cells after the balance of natural comb was completed, as is generally the case, no matter what sort of starters they commence with. The same result was obtained in the young and old queened colonies; the old having more drone cells than the young.

I think that Messrs. Dadant & Son's experience and observations differ somewhat from mine. as I find that bees generally build their combs to suit themselves, be it even on good worker-cell foundation. beginning at the middle of the top-bar, and pretty much in the shape of a heart, storing nectar and pollen just under the top-bar. even to the depth of 3 to 4 inches, and under this the brood, and wherever they think requisite they build in several drone cells by simply altering the worker cells into drone cells, and this without the fault of "sagging," "stretching," or the "manufacturers' altering of the wax." Again. others deposit drone eggs in worker cells (generally young queens), and then build up high above the surface of the comb. producing long, narrow-bodied drones, whose value I question very much as stock for use in reproduction. This is the case right here in this apiary; the old queened colonies have altered worker cells into drone cells, and produced pretty stout fellows, too; it looks as if it was three worker cells used for two drone cells, and then the young queened colonies have long, narrow-bodied drones hatched from worker cells. I have used nothing this season but Viallon's and Dadant's brood foundation, the former slightly lighter than the latter. I have put both kinds into 1,000 frames, upon 6 wires, and one centre metallic stiffening bar in each; Viallon's foundation in sheets that fill up completely the Simplicity Langstroth frames; Dadant's foundation with the usual allowance on the side and bottom-bars for "stretching." They have not given the same result, although worked into the same hives side by side; Viallon's foundation gives a solid frame completely filled with solid comb, but with some drone cells among the worker cells, although the sheets when put in were all work cells; Dadant's foundation gives a frame of comb barely joined to the sides, and ¼ inch space from the bottom-bar; they were put in at the same time, and had the identical advantage of being worked up, as I kept them just where the bees would do their best with them, and that is in the centre of the brood or surplus chambers; these have also some drone cells in them, and when put in it was all worker-cell sheets. Now, according to Messrs. Dadant & Son, these bees must be exactly like Mr. Hays' bees, changing worker cells into drone cells to suit their wants, but not "worker combs into drone combs," as they observed, as all will admit that foundation cannot be called comb until it has been worked up by the bees.

They further state that "for 20 years we have had colonies which do not rear 100 drones yearly!" This is all well and good, but will they please examine carefully and see if it is not worker cells that these bees have changed into drone cells to produce those drones, be their numbers what they may, except they have been using drone combs contrary to their advice to others to use *only* worker cell foundation or combs. I believe that Mr. Hays' experience and results are pretty much like my own, and our observations as carefully taken and now reported in this matter. as *bonafide* as the next man's. Please inform us if we should put all worker cell foundation in the hives, which all experienced bee-keepers generally do now-a-days, especially those who use full sheets, and if the bees did not naturally alter some of them into drone cells to suit their wants, where would we be? Where would the drones come from? Man has certainly done and is still doing a very great deal towards improving apiculture, and assisting the labor of the bees; but *nature* and *bee sense*—not instinct, something higher—he will never succeed in changing, as drones they must have for the continuance of their existence, notwithstanding we have checked their drone production to a very great extent by only giving them worker cell foundation or combs.

The bees in this apiary are still gathering nectar from the fall bloom, which has taken a good start after the few days of showery weather we have had lately, and if frost does not disturb these sunny and yet cool days, they may still gather a sufficiency to go into winter quarters, although we are preparing for that event independent of this bloom now on us.

Riverton,⊸ Miss., Sept. 23, 1886.

For the American Bee Journal.

The Solution of Bee-Keeping.

J. W. TEFFT.

As intelligence increases the relations existing between the honey-bee and man are being better understood. Air is the first and constant condition of animal or insect life ; and as the close relation which its purity bears to the physical health of the honey-bee is better comprehended, the greater is the demand for a perfect mode of protecting the bee from sudden changes of extreme heat and cold, by proper ventilation. Theory after theory has been promulgated only to prove to be failures when practically tested, and the world is to-day without practical authoritative system which will work under all circumstances. Why is all this? My answer is, that the application of theories to bee-keeping has been in the hands of scientific rather than practical men. Ever since Moses Quinby undertook to ventilate his hives at St. Johnsville, N. Y., what progress has been made in ventilation and protection from extreme heat and extreme cold, is shown by the condition of our bees every spring, and by the writings in bee-papers.

If the great scientific bee-men of the past and present have failed to establish a perfect system of protection from heat and cold, sudden changes, and for ventilation, one of two considerations must be arrived at, namely, there can be no perfect system established; and that these theory men have been working on a false basis.

The first conclusion must be discarded, for a perfect system of protection from sudden changes of heat and cold and proper ventilation can be established. The second conclusion is evidently the cause of failures. As the scientist has failed to give the world a true system, or one that may be relied upon for all time to come, would it not be better now to call upon persons who have practical understanding of bees and mechanics, as well as science, as relates to this subject; men who can combine natural laws of the honey-bee and mechanical principles in harmonious action? All that is required to produce a perfect system, is to have a perfect understanding of the natural laws of the honey-bee, and be able to apply them by the proper mechanical contrivances to insure successful results.

Science, unassisted by a practical knowledge of mechanics, has not solved, nor can it solve this problem. The great problems of the day are being solved by practical men, men of advanced ideas, but who lay no claims to scholarly education, titles or renown. They are the men who are to evolve a satisfactory system. Bee-keeping is tired of reconciliations between two things which should never have been contrasted. Bee-keepers are offended by a patronage of an ally which it professes not to need, and critics have rightly discovered that in most cases where theory, science, is pitted against practical bee-management, or fused with it, there is some fatal misconception to begin with, as to the scope and province of either.

The AMERICAN BEE JOURNAL improves with each issue, and will improve as the honey-producers demand it. We as bee-keepers scorn the unworthy sheet which panders to low taste and places before bee-keepers, reading matter not pertaining to bee-keeping. Let us as bee-keepers make the most of the situation of things, and strive to use every instrument we have at hand for the service of the bee. I believe the AMERICAN BEE JOURNAL is a pure bee-paper which furnishes clean bee-literature of a high class for perusal by all high-minded bee-keepers, and will come to be one of these instruments. It certainly gives us the most sensible views. It publishes more bee-news and special views from every part of the world than all other bee-papers combined. It is not an organ, and neither apologizes for nor tolerates theories. It has opinions on all bee-subjects of the highest order. Its fundamental doctrines are for the general welfare. It has no subsidies or exclusive privileges for anybody.

Collamer,⊙ N. Y.

For the American Bee Journal.

Notes of the Season.

J. F. LATHAM.

In this vicinity the apicultural prospect for 1886 opened auspiciously. When I made the first examination of my colonies, on April 20, the combs in most of the hives were well stocked with brood, and with few exceptions the condition of all was in an unusual degree satisfactory. A week of very fine weather followed, which gave the bees an impetus to increase their brood to such an extent that some of it was chilled during the severe weather that followed, though not enough to cause appreciable harm. The cold wave was succeeded by moderate weather, and although the sugar maples failed to bloom, the pollen from the willows and an abundance of surplus stores renewed the early bloom.

With the early fruit bloom swarming commenced on May 24, four days earlier than I have known it to commence during my eight years of bee-keeping. From the above date until July 1, when the 36th and last swarm was disposed of, a lively experience gave me an introduction to the reality of modern bee-keeping. By July 10 the drouth had browned the white clover bloom, and the surplus season for comb honey virtually ended. During the four weeks that followed, bees scarcely made a living; several of my colonies required feeding to carry them to the fall bloom, having stored about all of their clover honey in the surplus boxes. By Aug. 20 the fall harvest commenced, from which was stored a goodly quantity of surplus and a bountiful supply of winter stores.

As a result of my apistical efforts for the past season, I have 1,500 well filled one-pound sections of clover honey; 400 pounds of extracted honey, and an increase of 21 colonies from natural swarms, making my present stock 50 colonies in good wintering condition as regards strength, food, health, etc. Retrospectively I have no reason to complain of the general behavior of my co-workers. All of the swarms staid where they were put the "first time." No swarms absconded or attempted to abscond. The young queens were remarkably vigorous, and but one was lost during her mating flight. Although a large majority of my bees are hybrids of the Italio-German variety, I can recall but two instances when I have received stings that caused swelling; and those were more the result of my imprudence than the habitual malignancy of the bees.

Generally speaking, the past season has been cold and dry, although enough light rains have fallen to keep vegetation green. The nights have been unusually cool, and but few days hot; notwithstanding, while the flowers were in bloom they yielded nectar quite profusely, which fact seems to be somewhat at variance with some of the theories regarding the requisites of good honey weather. If I am correct in my observation, the principles of distillation as practiced by nature and art, are but slightly, if at all, at variance.

The experience of last season, and thus far the present season, has led me to think that a more definite co-operative system on the part of apiarists should be adopted in selling their honey. The diction of prices, and methods of disposal should be more directly controlled by the producer and consumer. As a staple honey is increasing in prominence yearly, and its sale should be made by weight only. Much misrepresentation is often indulged by some of the "handlers" of honey, too many of whom are ignorant of its qualities, or the first principles of its production. The act of buying a lot of honey in sections weighing on an average 12 or 14 ounces, and on retailing, representing them to customers as "full pounds" does not enhance the price or sale of comb honey in a very substantial degree; for consumers soon become educated to the fact that the vender is making more money on less honey, while they are obtaining less honey for their money, than were the commercial quantities represented in pounds and ounces. instead of "by the piece." This should not be. Let us insist that our honey be represented in its "handling" by the legitimate quantities—pounds and ounces.

In spite of the herculean efforts of the AMERICAN BEE JOURNAL to kill the hydra, the "Wiley pleasantry!" like Banquo's ghost, "it will not down." In spite of the bulwark of the nineteenth century enlightment, the idea (if it can be called an idea) exists that comb honey with its innumerable irregularities of finish, and delicacy of construction, can be fashioned by the uniform producing implements of mechanical art.

Cumberland, ♀ Me., Sept. 29, 1886.

For the American Bee Journal.

Apiarian Exhibit at Toledo, Ohio.

DR. A. B. MASON.

I wish to give an account of the exhibits in the apiary department at the Tri-State Fair, held at Toledo, O., last month. The exhibits in this department become more attractive each year. Mr. A. M. Gander, of Adrian, Mich., made a fine exhibit of both comb and extracted honey last fall, and this year did even better than last, and each year was justly awarded first premium on both, and also on best crate of comb, and on best quality of extracted honey. He was also awarded first premium on a Stanley honey extractor.

W. Z. Hutchinson did us the honor to make our exhibit more interesting and attractive than usual by exhibiting some fine comb honey and some very choice extracted honey. He also made a fine display of honey-producing plants. and was awarded premiums on all his exhibits.

Mr. L. Eastwood, an old grey-headed and enthusiastic bee-keeper of Waterville, O., made a good display of comb honey, which was awarded a premium. C. H. Christlieb was awarded a premium on a nice exhibit of Italian bees. Mr. H. H. Overmyer, of Lindsey, O., made a display of extracted honey, and sold all he had on exhibition, and took orders for a large amount besides. Mrs. Mason (that's my better half, you know) made a small but quite attractive exhibit of comb and extracted honey, on which she was awarded first premiums.

Being located near the Fair Grounds I made it a point to fill all the space not occupied by others. My honey exhibit was entirely of extracted. I had also Italian and Carniolan bees, and extra queens that attracted the usual amount of attention. A large lump of candied honey that I had on exhibition was the "innocent cause" of such remarks as, "See the sugar!" "O, what nice sugar!" etc., and it was just such remarks that we (bee-keepers) liked to hear. for it gave us the coveted opportunity to show and teach the people what pure extracted honey is, and that it will become candied. But one lady turned up her sharp little nose at my (to me) excellent talk and would not believe a word I said about it being honey, and I could not persuade her to taste of it, but her husband (sensible man) tasted "and believed,"

A lady in passing the hives where the bees were, said she did "not want any more honey if it was made by such nasty looking bugs as those." A boy said, "O, see the bed-bugs, see the bed-bugs, ain't they nice!" A lady wanted to know "how the bees could live when they could not get out of the hive to get anything to eat." But the best of all was a woman, with several children. There were a few dead bees lying on the bottom of one of the hives, by the glass side, and she told the children that "those are bees that would not work, and the other bees have killed them." The bees were dragging along a nearly dead one, and she said, "See! there is one that will not work, and they are killing it now." I thought "ignorance is bliss," etc., and kept quiet.

We have had the good fortune to get first-class judges for our department each year since it was first made a part of our Fair. The editor of the BEE JOURNAL certainly will not soon forget how he kindly came over 200 miles ("free gratis, for nothing") to help us make a good start, and with Messrs. H. R. Boardman and H. H. Overmyer, served as judge, when our exhibit was quite small; and how the next year, the editor with C. F. Muth, of Cincinnati, and the Hon. Mr. Cotton, of Indianapolis, served us again as judges. For the last three years we have had the good fortune to secure the services of the present President of the North American Bee-Keepers' Society as judge, and I believe he has given universal satisfaction.

Perhaps I have written too much, but I like to read the different reports of honey exhibits, and I believe it would be for the interest of our industry if bee-keepers would improve the opportunities offered by the different State and local fairs to exhibit the products of the apiary and the implements used in it.

Wagon Works, ⊸ O.

◆

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	2 00	1 25
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 70
Canadian Bee Journal	2 00	1 75
The 6 above-named papers	5 50	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Local Convention Directory

1886. *Time and place of Meeting.*

Oct. 16.—Sheboygan Co., at Sheboygan Falls, Wis.
Mrs. H. Hills, Sec., Sheboygan Falls, Wis.

Oct. 16.—Western Iowa, at Stuart, Iowa.
J. E. Pryor, Sec.

Oct. 19.—Central Mich., at Lansing, Mich.
J. Ashworth, Pres.

Oct. 21.—Southern Illinois, at Benton, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Oct. 23.—Eureka Springs, at Eureka Springs, Ark.
Dr. S. S. Purcell, Sec., Eureka Spring, Ark.

Oct. 23.—Wabash County, at Wabash Ind.
Aaron Singer, Sec., Wabash, Ind.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Nov. 24, 25.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Not "My Friend."—W. Z. Hutchinson, Rogersville, ⊸ Mich., writes thus on Oct. 1, 1886:

From conversation with bee-keepers, at Fairs and others places, I find there is a general impression that I am the person referred to by Mr. Heddon, in his book, as "my friend." While there is no danger of my reputation suffering from a continuance of such belief, still I dislike sailing under false colors, and prefer to give "honor to whom honor is due." hence I desire to say that I am not "my friend."

Winter Stores.—J. H. Andre, Lockwood, ♀ N. Y., on Oct. 2, 1886, writes:

I wish to make an explanation concerning my article on page 599. Taken as it reads, it contradicts itself, and also what I have expressed heretofore. My meaning was that I did not wish to winter bees wholly on sugar, but if others desired to do so, I could see no harm to the honey or sugar trade either; and that I believed in stimulative feeding in the spring, and preferred sugar instead of honey for the reasons enumerated. Yesterday was the first day too cold for bees to work in nearly six months.

Age of Queens.—Gust Murhard, Portland, ⊸ Oreg., writes:

On page 596 is a query on the "time of a queen's fertility and usefulness." My observations have been mostly made on Mt. Lebanon queens, both self-reared and imported. A young queen reared this season is in her prime of life, and fertility during the next season, but with the expiration of that season, she has passed the meridian of her life and fertility, and is, therefore, on the decline, although her fertility is but half exhausted, and will last another season and winter; but in the forepart of the fourth year, her fertility will give out, when she is balled and superseded by the workers, by rearing a young queen, and it is at this time when two queens may be found in a colony. This is my repeated experience, and I do consider a young prolific queen but for the first season good for the honey apiary, as with the expiration of that season she has passed the meridian of her life, and is, therefore, on the decline, upon the appearance of the first symptoms of which the workers' instinct of self-preservation of the race through reproduction by colonial propagation, called swarming, will be aroused. That I am correct, any bee-keeper will find if he will try the Mt. Lebanon bees where a colony with a young prolific queen of the previous season in a large hive will but seldom take to swarming the first season, but sure to do so the next season, if the same queen is still in the hive. This is the result of repeated experience, and it is for the reason that the Mt. Lebanon bees with a young prolific queen of the previous season will not swarm, that I prefer them over all other bees of a pure race for the honey apiary.

Hive Packing for Winter.—J. R. Putnam,⊸ Ills., makes the following inquiries:

1. How will it do to make boxes the same size as the tops of the hives, 5 or 6 inches high, and put on the bottom of them bagging, filling the same with sawdust, and put over the brood-chamber, and the cap or top of the hive over this? 2. Will it absorb so much moisture that it will freeze in the winter, or will it keep dry and keep the bees warm?

[I have now in use 150 of just such boxes filled with chaff and planer-shavings. They perfectly absorb the moisture, both in the cellar and out-doors, but I find that success or failure in wintering does not depend entirely, or mainly, upon the absorption of moisture.—JAMES HEDDON.]

No Nitrogen in Fat.—Prof. A. J. Cook, Agricultural College,♀ Mich., on Sept. 30, 1886, writes:

Mr. Samuel Cushman, on page 617, states that I say that nitrogen may be transformed into fat. He quite misunderstood me. There is no nitrogen in fat; nor is there any carbon, hydrogen or oxygen (the elements of fat) in nitrogen. Hence any such statement would be perfectly absurd. I did say, and it is true, that nitrogenous food can be transformed into fat, or into sugar. Feed an animal solely on albuminous food, and the liver still continues to form glycogen, and its consequent sugar. In such a change the nitrogen of the albuminous food is eliminated, and the proportions of the other elements changed in the wonderful laboratory of nature.

Sweet Melissa.—A. C. Tyrrel, Madison,♂ Nebr., on Sept. 17, 1886, writes:

I send you a specimen of a honey-plant, called by the Germans "Sweet Melissa," imported from Germany in 1881, which, after two years' trial, I consider one of our best honey-plants, being very hardy, a free bloomer, commencing to bloom in June, and continuing to blossom until killed by frost. It is better liked by bees than white clover, spider-plant or carpenter's square (Simpson's honey-plant). In fact they will fly past all other flowers when "Melissa" is in the field. After once sowing the seed no further effort is necessary, as it is self-sowing. I have seed sufficient for an acre of ground, and next season I will be able to make a more intelligent report. Bees here do exceedingly well, and are now bringing in honey very fast from goldenrod and other wild flowers, of which there are hundreds of acres within easy reach. Please give its botanical name.

[This is *Melissa afficinalis*, a plant formerly much cultivated for its citron-like perfume. The name "Melissa" is from the Greek name for bee, on account of the attractions the plants were observed to possess for these honey-gathering insects; so the value of the plant to the apiarist has been long recognized.—T. J. BURRILL.]

Lime in the Cellar.—M. M. Cram, Mankato,♀ Minn., asks the following:

Would it be a good plan to put a dish of unslaked lime in the cellar to take up any dampness, and purify the air for the bees?

[I have tried it, and I cannot say that it has any perceptible effect upon successful wintering. To get rid of bee-diarrhea is the problem, and I have succeeded in doing it in very damp cellars, and failed in very dry ones.—JAMES HEDDON.]

* * *

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—For comb honey, we quote 12@13c. Extracted 6@7c.
BEESWAX.—23c. R. A. BURNETT.
161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.
BEESWAX.—Prime yellow, 22@24c.

McCAUL & HILDRETH BROS.,
34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.
BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Owing to more liberal arrivals the market for honey is lower. Best in 1-lb. sections, 12½13c.
BEESWAX.—23c.

M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—Extracted honey brings 3 1-2@7c.; comb honey, 12 to 14c. for good to choice, in the jobbing way.
BEESWAX.—It is in good demand and arrivals are fair. We pay 20c. for good yellow.

C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.
BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is good for all grades, and sales are large, while the supply is the same. Prices remain the same. One-pound sections, white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 9@10c.; ½-lbs., light, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5@5½c.
BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.
BEESWAX.—No demand.

Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted; 3¼@3¾c. for amber extracted; and 8@11c. for comb honey in 2-lb. sections; 12@13c. for 1-lb. sections.
BEESWAX.—It finds buyers at 20@23c.

Sep. 28. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Receipts are light and the market is very quiet. We quote: White extracted, 4@4¼c.; amber, 3¾c. Comb, 8½@10c. for white.
BEESWAX.—19@22c.

O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.
BEESWAX.—Dull at 21c. for prime.

Sep. 30. D. G. TUTT & CO., Commercial St.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

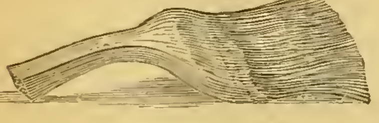
Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage



◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, **5** cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers before Jan. 1, 1887.

◆

"Cash in Advance" is the rule, but no longer than six months of grace can be allowed on the small sum of one dollar. Subscriptions may commence at any time, and discontinuances may be ordered at any time when arrearages are paid up.

◆

When Marketing Extracted Honey, it is a sad *blunder* to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

◆

We have made arrangements by which we can supply the Weekly AMERICAN BEE JOURNAL and the Monthly *Bee-Keepers' Magazine* for 1887, both periodicals for the very small price of $1.25, or the above and *Gleanings* for $2. Three bee-periodicals for the usual price of one!

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

◆

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

To any One sending us *one new* subscriber with his own renewal (with $2.00), we will present a copy of the new "Convention History of America."

Advertisements.

WANTED, an active, reliable man in every city and town in the State of Illinois to work up Councils of the American Legion of Honor, an insurance organization now having 60,000 members, and we are willing to *pay liberally in cash* for services rendered in this work. It can be performed at odd and leisure hours without interference with regular business, and is an occupation affording much pleasure to those engaged in it. For full explanation how to go to work and what to do, address

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILLS.

HOW to WINTER BEES.

☞ See pages 525, 543, 558, 574, 590, 606, 621, and 637, of the American Bee Journal.
41Atf

FOR SALE.—25 Colonies of CHOICE ITALIAN BEES, in chaff-packed Hilton hives (shingle roof). Hives are new and first class ; bees have enough stores for winter.—Will sell for **$6.00** per colony.

A. M. APTED, Grand Rapids, Mich.
40A2t

Honey For Sale.

We have a large quantity of the best white EXTRACTED HONEY, in 200-lb. Kegs, for sale, which we will deliver on board the cars at 8 **cents** per pound. Orders solicited.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf **J. VANDERVORT, Laceyville, Pa.**

THE AMERICAN APICULTURIST

WILL be sent one year and a copy of the 3rd Edition of the Bee-Keepers' Handy-Book, on receipt of $1.50. The book contains 300 pages and 100 fine illustrations.

HENRY ALLEY,
41Atf WENHAM, MASS.

Vandervort Foundation Mill.

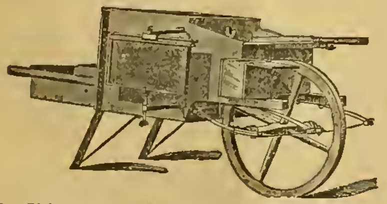
6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Systematic & Convenient



DAVIS' PATENT HONEY CARRIAGE,
REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only............ $18.00.

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GUIDE and HAND-BOOK

OF USEFUL INFORMATION.

For HOME SEEKERS or Tourists, Capitalists or Laborers. A vast amount of information not to be found elsewhere at any price.

A cloth-bound book, 4x7 inches, 288 pages

Price, 50 Cents.

The following is only a part of the Contents:

Colored Maps of all the States and Territories, including Alaska and District of Columbia.

Diagrams showing area, population, products, Government, State, School and Indian Lands of the several States.

Histories of each of the States from the Earliest Times.

How to Acquire Lands of any kind belonging to the Government by any forms of entry who may acquire them, and the different laws,: applicable to the different sections.

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Rules for measuring Lumber, Logs, Grain, Liquids, Tables of Weights and Measures of all kinds, Interest Rules and Tables, Lumber Tables.

Systems of Land Measures in various parts of the United States.

Contains also a Million Useful Facts.

The Weekly Bee Journal, for one year, and the Guide, postpaid, for $1.30.

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1A1y Agricultural College, Mich.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE HORSE,

By B. J. KENDALL, M. D.

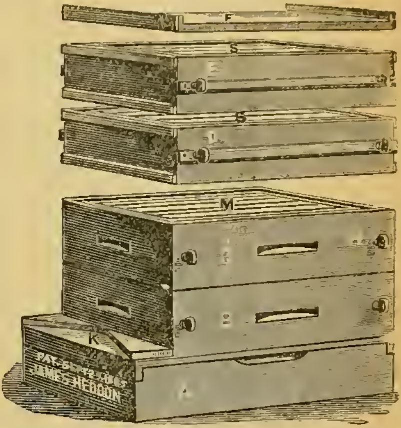
A TREATISE giving an index of diseases, and the symptoms ; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison ; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse ; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail ; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections ; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand ; a slatted honey-board, and cover ; two 6-inch brood-chambers, each containing 8 frames ; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers :

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices : Stand, 14 cents ; honey-board, 8 cents ; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time : For 10 or more hives, 5 per cent. discount ; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison-St., CHICAGO, ILL.

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, $1.00, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

☞ The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for $1.75.

THE LARGEST

Bee-Hive and Section Factory

IN THE WORLD.

GREAT REDUCTION!

UNTIL January 1st, we will sell at a discount. Write for Reduced Prices.

G. B. LEWIS & CO.,
37Atf WATERTOWN, WIS.

DR. FOOTE'S

HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping Bathing, Working, etc.

IT TELLS ABOUT

- What to Eat,
- How to Eat it,
- Things to Do,
- Things to Avoid,
- Perils of Summer,
- How to Breathe,
- Overheating Houses,
- Ventilation,
- Influence of Plants,
- Occupation for Invalids,
- Superfluous Hair,
- Restoring the Drowned,
- Preventing Near-Sightedness,
- Parasites of the Skin,
- Bathing—Best way,
- Lungs & Lung Diseases,
- How to Avoid them,
- Clothing—what to Wear,
- How much to Wear
- Contagious Diseases,
- How to Avoid them,
- Exercise,
- Care of Teeth,
- After-Dinner Naps,
- Headache, cause & cure,
- Malarial Affections,
- Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

Price only **25** Cents. Sent by Mail, post-paid.

THOS. G. NEWMAN & SON,
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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

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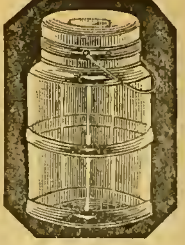
GLASS PAILS



FOR HONEY.

THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen,	.....	$1.60
" 2 pounds " "	.....	2.00
" 3 " " "	.....	2.50

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Entrance Feeders, Top and Bottom Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

10Aly **J. M. SHUCK, Des Moines, Iowa.**

Muth's Honey Extractor,

Perfection Cold-Blast Smoker,

SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to

CHAS. F. MUTH & SON,
Freeman & Central Ave., - CINCINNATI, O.

P.S.—Send 10c. for Practical Hints to Bee-Keepers

RIBBON BADGES.

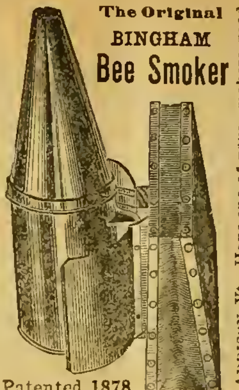
We have some ELEGANT RIBBON BADGES, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOS. G. NEWMAN & SON.,
923 & 925 West Madison Street, Chicago, Ill.

The Original

BINGHAM

Bee Smoker



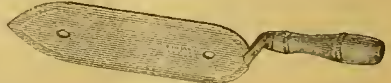
Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last, I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

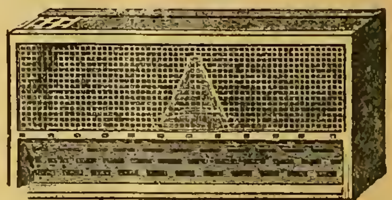
Prices, by mail, post-paid.

Doctor smoker (wide shield)	..3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)	....2½ " ..	1 50
Extra smoker (wide shield)	....2 " ..	1 25
Plain smoker	.........2 " ..	1 00
Little Wonder smoker	..........1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch	....	1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
15Atf **ABRONIA, MICH.**

Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with **Hives, Sections, Shipping-Crates, Supers, etc.,** of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Oct. 20, 1886. No. 42.

The Convention at Indianapolis, Ind,, was a very pleasant gathering of bee-keepers, and all appeared to have a very enjoyable time. The committee of arrangements had everything about perfect in preparing for the meeting. Messrs. Cutting and Dougherty and Mrs. Cass Robbins deserve much credit for their exertions to make the time a pleasant one. On the evening of the second day, Mrs. Robbins and her lady friends, assisted by Mr. Dougherty, got up an entertainment interspersed with ice-cream and cake, which was very enjoyable, and all the bee-keepers, both male and female, seemed to be well pleased with it. A blind young man by the name of Hansen, performed some very fine instrumental music on the piano, as well as singing several songs. A gentleman recited a poem, entitled "Fesslers Bees," which was very amusing, and produced roars of laughter. Thanks were passed by a "standing" vote to the ladies and their friends for the excellent entertainment provided, which was quite unexpected, but none the less appreciated. We give a report of the first day's sessions in this issue of the BEE JOURNAL, and the others will follow in subsequent issues.

◆

A National Corn Show will be held Nov. 8 to 19, in the Exposition Building, Chicago, in connection with the National Fat-Stock Show. One hundred premiums will be awarded on exhibits of 20 pounds of corn in the ear. Of these, 56 are cash premiums of $10 and $5. Competition will be between the growers themselves, in *each* of the *seven* principal corn-growing States. Four premiums of $15 and $25 are to be awarded as sweeptakes in the competition between the growers of the different States. Most of the express companies co-operate, by offering to carry parcels for exhibition, *all distances*, over their respective lines at a small, nominal charge of 25 cents if not exceeding 25 pounds, placing distance and near localities on a par. Entries close on Oct. 26. Full particulars supplied on application to the "Secretary of Corn Show," care of *Prairie Farmer*, Chicago, Ills.

◆

English Honey Markets are very much excited now over the 40 tons brought by the Canadians. A bee-keeper in Surry writes this to the *London Journal of Horticulture* concerning that lot of honey, and the probable result of its sale on the English maket :

> The exhibit of honey from Canada, which is now on view at the Colonial Exhibition, will be likely to cause alarm to timid bee-keepers who already are dissatisfied, and not without reason,at the small price offered for honey, even though the honey harvest of this year has been much below the average. It is no use trying to shut our eyes to the fact that the sale of this 40 tons of honey will sensibly affect the price of English honey. Still we venture to think that the ultimate result will be to the advantage of English bee-keepers, and for much the same reasons as the late exhibition of the B. B. K. A. has done good in bringing before the public mind the great advantages of honey as food, and the capabilities of our own country for supplying a large amount of honey. At present honey has a very limited sale, and until we can educate the public mind to the fact that it is a necessary food, and not merely a luxury to be indulged in by the few, so long will there be a difficulty in securing honey even at the low price offered by the honey companies and the dealers.
>
> To take a parallel case, we can well remember tasting our first tomato nearly thirty years ago, and thinking how unpleasant it was. For many years after this there was little or no demand for this fruit, but within the last few years the demand for tomatoes has enormously increased, and it is said to be a better paying crop than grapes, and as far as we are concerned we never pass by this fruit, especially in the form of salad.
>
> It would be difficult to point out the reasons for this change, but the fact remains that the consumption of tomatoes is steadily increasing. So with regard to honey, if the public will take it into their heads to use honey in larger quantities than they have done, there will be no difficulty in finding out the real value of honey.
>
> The public press is a very good indicator of public opinion. Though the B. B. K. A. have held several shows in London during the last twelve years, very slight notice was taken of these shows, for bee-keeping was looked upon more as a hobby than an industry. But with regard to the last Show, the press quickly recognized the fact that there was something in bee-keeping, and all the leading papers had editorials on the subject, pointing out the great strides that had been made during the last few years.
>
> At present the supply far exceeds the demand, and, except for sections, there is not much business done in honey, as last year's stocks have not been exhausted. The Canadian exhibit will help to educate the public mind, and when once the demand is established there will be no difficulty as regards the supply either from home or abroad.
>
> This naturally brings us face to face with the question, can we compete with Colonial or foreign bee-keepers? In the *Pall Mall Gazette*, Sept. 17, there is an account of bee-keeping in Ontario, by Mr. Jones, one of the deputation from the Ontario Bee-Keepers' Association. He estimates the average honey harvest at £100,000, and the average yield of honey from a colony at 30 pounds, though cases have been known where 100 to 600 pounds have been obtained from one colony in a single season. This, of course, is an enormous yield, and we have never known a colony in Great Britain that could touch this limit, though Mr. Cowan averages 100 pounds from his 14 colonies, and we met a bee-keeper in Wales this summer who had taken 200 pounds from one colony, and still had the Heather honey harvest to increase this yield.
>
> The price of honey in the comb at Ontario is 1s. a pound, while extracted fetches 8d. Taking into account the cost of carriage, commission, etc., these prices are too high for the English market. Last year the wholesale price of good one-pound section honey varied from 6d. to 8d., and extracted from 4d. to 6d. per pound. This year prices have slightly stiffened, as the harvest has been deficient, but a large bee-keeper offered to supply sections at 6s. per dozen, and said that he could at that price secure a very good profit for himself. Every one knows that the question of carriage is the burning question of the day, as far as farm produce is concerned. Foreign fruit is underselling our home fruit, because the railways give greater facilities for conveying fruit from the continent, and charge less for the freight than they do for fruit from the Kentish orchards, with the result that the farmers are allowing their plums to decay on the trees, as it does not pay to send them to Covent Garden. If the Canadian bee-keepers can get their honey delivered in London at less cost than we can get honey delivered, say from Lancashire, it will be a bad look-out for the British bee-keeper ; but though they may be able to undersell us as far as extracted honey is concerned, it will be a more difficult task to drive our section honey out of the market.

◆

The Honey Season in Scotland.—A Lanarkshire bee-keeper writes thus to the *Journal of Horticulture :*

> Between Sept. 4 and 13, in this part of Scotland, we had heavy rainfalls, high winds, with an almost sunless sky. One day only during that period the sun shone, and then for a short space of time only. This has been disastrous alike to bees, crops of every kind, and threatening a total destruction in some places to the potato crop. The other day, of potatoes sufficient for a family of four, only one was free from the disease. There has been only one day upon which the drones flew, the result being that only a few late-bred queens are fertilized. I have sufficient for my own use, but some friends must be disappointed. The loss in bees is but a trifle when compared with the crops lying upon the sodden soil caused by exceedingly heavy rains.
>
> The honey of this year here in the north is not only scarcer than that of last year, but is as a rule very much thinner and inferior in quality, most of it being quite subject to the extractor. The above report applies to a wide area, and in many places there is not even a surplus of honey an account of the low temperature. Where my bees stand at the Heather, we had a fall of snow on May 13 that completely buried the skep, and frost and rain have been seldom absent since.

◆

Photographs of 131 of the principal apiarists of America, all on one sheet, 11x14 inches, were exhibited at the Indianapolis Convention, by Mr. E. O. Tuttle, of Vermont, who has gotten them up, and will soon offer them for sale.

◆

Frank Leslie's Sunday Magazine for November opens with the fourth of Mr. Powell's interesting "Leaves from My Life," dealing with the poet-banker, Samuel Rogers, and the witty Douglas Jerrold. Among the elaborately illustrated articles is one entitled "The Still-vex'd Bermoothes," in which a bright description of the Bermudas is accompanied by twelve scenes from the islands. "Salem, Past and Present," shows us some scenes from the old town of witches, in Massachusetts ; and many other interesting articles and fine illustrations. The number is up to the high standard of excellence attained by this magazine.

◆

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

QUERIES
AND
Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Transferring Bees, etc.

Query, No. 324.—1. Will bees do as well transferred in the fall on full hives of foundation and fed back honey, or syrup from sugar, to winter, as if transferred early in the season? 2. Is 1,000 square inches of comb large enough for a brood department, and surplus added as needed for honey storing? Here in Texas the winter is merely nominal, only about one month of freezing to kill grass.—D., Texas.

We think your plan will do very well in Texas.—DADANT & SON,

1. I would hardly feel as safe about it. 2. I think so; although I doubt if the mildness of the winter makes less room needed.—C. C. MILLER.

1. In your locality, "yes." 2. It may do in the hands of some, but with my method of management, it would be too small for me.—H. D. CUTTING.

1. It would need repeated trials to show the truth in the matter. In the North I should suppose so much labor late in the season might be an injury. 2. I think not.—A. J. COOK.

1. Yes, if done sufficiently early so that the bees can get things in shape before winter. 2. Yes, unless it is in the spring before swarming time.—W. Z. HUTCHINSON.

1. For this locality I should prefer to do it early in the season, but the proposed plan may work well in Texas. 2. My experience says that it is.—G. M. DOOLITTLE.

1. They will do just as well. But then it should be upon frames of natural comb and not foundation. I transfer hundreds of colonies every fall and winter, and prefer it to the spring. 2. I consider 1,000 square inches of comb not sufficient. I would not want less than 1,500 square inches.—J. P. H. BROWN.

1. I think not, as there would be too little time given for rearing brood, and new comb does not answer as well as old, particularly that in which brood has been reared. 2. Yes, I think so. I winter my bees on from 3 to 7 Langstroth size combs, such combs contain about a square foot of cells on each side. I winter my bees on the summer stands. More stores would be required for successful wintering in a warm than in a cold locality, the reason for this being obvious. So that where only 1,000 square inches is given for brood-nest, considerable surplus should be added.—J. E. POND, JR.

1. I prefer spring to fall transferring, although I have seen each result in success. I prefer sugar syrup to any honey for winter stores for bees. 2. I prefer to give colonies breeding room larger than you mention (1,000 square inches of comb) during a portion of the breeding season, and smaller than that during another part of that season. I practice the contraction method with the most gratifying results. This contraction should be governed by locality.—JAMES HEDDON.

1. You may transfer bees at almost any time if you give them proper attention; but spring is the best time, and as you put the question I answer, no. Bees will not build comb or draw out foundation late in the season like they will in the early part of the season. 2. If you mean actual comb surface, 1,000 square inches will answer for brood alone, but in a Southern climate the ten-frame Langstroth hive is none too large, which has comb surface of at least 1,440 square inches.—G. W. DEMAREE.

1. If not too late in the fall I think they would. 2. This is a query of more than usual importance to beekeepers. My opinion is that 1,000 square inches of comb is too large for a swarm, and not large for building up in the spring in working for comb honey. A swarm does best on about 700 square inches of comb, according to the time it issues, and the length of the honey-flow. After much experiment I prefer 750 square inches of comb, allowing the bees to build it from starters 2 inches wide in a shallow reversible frame. For spring management the brood-chamber should be just double the capacity allowed for a swarm, or 1,400 or 1,500 square inches of comb.—G. L. TINKER.

Honey in Drone-Comb for Winter.

Query, No. 325.—I have quite a number of frames of drone comb filled with dark sealed honey. Will they do to put in a hive for winter stores, or had they better be extracted and fed into worker comb? I shall have to use three or more of them for each hive. Will bees cluster on them as well as on worker comb? I mean for them to pass the winter on the drone comb the same as if on worker.—Granger, N. Y.

I think I would use them as they are.—C. C. MILLER.

Yes, they are all right provided the honey is of good quality.—H. D. CUTTING.

If you remove them in the spring it will be all right, for they must be replaced by worker comb by the time the bees breed in the spring.—DADANT & SON.

I should use the frames of honey as they are without extracting for winter stores. It does not matter if the comb is drone.—J. P. H. BROWN.

As far as my knowledge goes bees winter as well on drone comb as on worker comb.—G. M. DOOLITTLE.

I know no reason why the bees need not winter as well on drone as on worker comb.—W. Z. HUTCHINSON.

They are just as good for winter. In the spring worker comb should be placed in the centre for brood.—A. J. COOK.

I have used drone combs full of honey for winter stores many a time, but I always have some worker combs between them for the queen to commence brood-rearing in the latter part of the winter. For winter stores they are just as safe as worker combs are.—G. W. DEMAREE.

Put them in as they are. Who ever heard that drone cells were not as well adapted to wintering as worker cells? Thousands of colonies have wintered well with hives replete with drone combs.—JAMES HEDDON.

1. If the honey is well ripened and pure I see no reason why it will not prove safe for winter stores. 2. Bees will cluster as well on drone as on worker comb, but when brood-rearing begins trouble will arise. If worker comb is given early in the spring, perhaps (?) it may come out all right to use the drone now, but I myself should prefer the stores to be in worker comb.—J. E. POND, JR.

They will do just as well on the drone comb for winter, and with some strains of bees, and plenty of worker comb, a large amount of drone comb is not objectionable unless it be for the space it occupies.—G. L. TINKER.

Wintering Bees in the Cellar.

Query, No. 326.—I can put my bees into a cellar the temperature of which does not vary more than two or three degrees throughout the year from 52°. Being unconnected with any building, bees in it would not be disturbed by noises or other outside influences. It is, however, very damp, but can be well ventilated. 1. How will this cellar answer for wintering bees? 2. How much would such a cellar be worth to the man owning 150 to 200 colonies of bees? I have always wintered my bees out-of-doors, heretofore, very successfully.—G., Illinois.

1. Not very well. 2. If we were in your place we would keep on with the wintering that gave you satisfaction.—DADANT & SON.

From the statement I should say it would be all right. How much it would be worth would depend upon circumstances.—H. D. CUTTING.

1. I think it ought to be a good cellar, but I would not pin my faith to any cellar without actual trial. 2. That depends altogether upon circumstances.—C. C. MILLER.

I have never wintered my bees in a cellar, so my opinion would be of no value, as it would be drawn entirely from my reading of the experiments of others.—J. E. POND, JR.

If I could winter bees out-of-doors successfully, I should not bother with the cellar.—G. M. DOOLITTLE.

1. I think it will answer well, but I should be inclined to continue to winter my bees out-of-doors if "very successfully."—W. Z. HUTCHINSON.

If you have wintered your bees successfully on the summer stands, you had better let "success" alone. You might try a few colonies in the cellar, and find out by actual experiment whether you can save in winter stores more than enough to pay for rent of cellar, etc.—G. W. DEMAREE.

1. Yes, that cellar is a good one, and as it maintains so high a temperature, I should care nothing for dampness. 2. You ask how much such a cellar would be worth, but you do not state the size or durability of construction. I consider it very worthy as a bee-repository.—JAMES HEDDON.

I think the temperature of the cellar too high for early winter, but suppose it can be lowered. Bees will not hibernate at 52°, but will remain active and consume too much. If the temperature can be properly regulated, such a cellar would be worth its cost to a bee-keeper having 200 colonies of bees.—G. L. TINKER.

I should prefer a lower temperature—45° Fahr. I have often wondered whether Mr. Barber's cellar is really as warm as he thinks. As he states it I do not see how he keeps it so. Our cellar is always wet, yet it is excellent. Bees have wintered nicely in it with a temperature of about 38°, Fahr., all winter. I should have fears of a cellar at 52°, Fahr. A man who has wintered his bees invariably with succeess at a temperature of about 45°, thought last winter to improve well enough, as he heard the discussion at Detroit. He warmed up his cellar and lost several colonies, and injured many more.—A. J. COOK.

Convention Notices.

☞ The Wabash County Bee-Keepers' Association will meet at Wabash, Ind., on Oct. 23, 1886.
AARON SINGER, *Sec.*

☞ The annual meeting of the Western Bee-Keepers' Association will be held in Pythian Hall (11th & Main Sts.), at Kansas City, Mo., on Oct. 27—29, 1886. P. BALDWIN. *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Southern Illinois Bee-Keepers' Association will hold its next meeting at Benton, Ills., on Thursday, Oct. 21, 1886. F. H. KENNEDY, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Nov. 24 and 25, 1886.
J. M. HAMBAUGH, *Sec.*

☞ All are respectfully invited to attend the next meeting of the Bee-Keepers' Association of Eureka Springs, which will be held at Eureka Springs, Ark., on Oct. 23, 1886. Business of importance to every bee-keeper in Northwest Ark. will be before the meeting.
DR. S. S. PURCELL, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

North American Bee-Keepers' Society.

The 17th annual convention of the North American Bee-Keeper's Society assembled in Pfafflin's Music Hall, in Indianapolis, Ind., at 11 a.m., on Oct. 12, 1886, with the President, H. D. Cutting, and the Secretary, F. L. Dougherty, in their respective positions. About 75 bee-keepers were present at the opening session.

After calling the convention to order, the President introduced the Mayor of Indianapolis, Mr. Caleb S. Denny, who, on account of the absence of Gov. I. P. Gray from the city, delivered the address of welcome both to the State and to the city. The Mayor's address was full of earnest words of welcome to the society, and contained much that indicated his kindly feeling toward this enchanting pursuit, in which so many are engaged. He admired the manner in which bee-keepers endeavored to protect their favorite industry from the attacks of the ignorant and jealous. He wished the society to know that although he himself was not a bee-keeper, yet he felt a deep interest in the cause which they championed, and would do all he could to assist in making it all that bee-keepers desired it should be. After reviewing somewhat the history of the organization of the society, and hoping that the present meeting would be one of the most profitable the society ever held, he again expressed the great pleasure it afforded him, of welcoming the society to the city of Indianapolis for the third time since its organization in Indianapolis on Dec. 21, 1870.

In the absence of Dr. C. C. Miller, who was to express the thanks of the society, President Cutting requested Mr. Thomas G. Newman to make the address, which was substantially as follows:

Mr. President, Ladies, and Gentlemen:—His Honor, the Mayor, has referred to the birth of this International Society at this city 16 years ago, and it will be quite appropriate for me to state that our society is a power in the land, from the fact that it keeps abreast with science and invention in the progress of "to-day"—that its pulse thrills with the transcendent issues of our time—that it is its consecrated task to put into the activity of this age all the great truths of the past and present—as it were, to animate the mighty organism of bee-culture with the soul of the past, and the progressive spirit of the present and future! In this spirit, with this purpose, we meet; in this spirit, with this purpose, let us greet each other; and in this spirit and with this purpose let us part.

We are here to enjoy the social part of our society; to create a good natured rivalry, to debate the subjects that are presented, for we learn "little by little," "here a little and there a little," in the important subjects of the scientific management of bees, marketing and developing the means of selling our crops of honey. Here we possess the grand arena for the best thoughts and words affecting our pursuit. We bid all a hearty welcome to our discussions, and hope that a flood of light will be the result.

The President remarked that as the minutes of the previous meeting had been published in pamphlet form, all could read them for themselves. He then suggested that a recess of ten minutes be taken, during which time those who desired to become members of the society might do so by giving their names, and $1 each, to the Secretary. The list is as follows:

HONORARY MEMBERS.

E. Bertrand, Nyon, Switzerland.
Frank R. Cheshire, London, England.
Rev. Wm. F Clarke, Guelph, Ont.
Prof. C. V. Riley, Washington, D. C.
Hon. —— Ross, Ontario, Canada.
Hon. Edwin E. Willets, Lansing, Mich.

LIFE MEMBERS.

D. A. Jones, Beeton, Ont.
Thomas G. Newman, Chicago, Ills.

MEMBERS.

T. S. Bull, Valparaiso, Ind.
Dr. J. A. Minnich, Indianapolis, Ind.
C. P. Dadant, Hamilton, Ills.
E. C. Hubbard, Water Valley, N. Y.
Geo. F. Robbins, Mechanicsburg, Ills.
L. Dawson, Champaign, Ills.
Geo. Kirkpatrick, New Paris, O.
T. H. Kloer, Terre Haute, Ind.
H. Chapman, Versailles, N. Y.
Layton Hawkins, Bridgeport, Ind.
E. T. Jordan, Harmony, Ind.
John Nebel, High Hill, Mo.
Jno. T. Dinsmore, New Brunswick, Ind
E. W. Crist, Crawfordsville, Ind.
N. D. Coffin, Westland, Ind.
H. N. Hockett, Jonesboro, Ind.
Andrew Dunlap, Terre Haute, Ind.
G. W. Redmon, Paris, Ills.
Burr Roye, Herbst, Ind.
J. A. Reeds, Hindsboro, Ills.
W. S. Pouder, Groesbeck, O.
E. O. Tuttle, Bristol, Vt.
Mrs. J. H. Lowden, Bloomington, Ind.
Mrs. Ellen Bryner, Indianapolis, Ind.
Mrs. F. M. Cooper, Morgantown, Ind.
Eli Smith, Lebanon, Ind.
W. S. Hart, Hawk's Park, Fla.
W. T. F. Petty & Son, Pittsfield, Ills.
J. N. McFerran, Brownsburg, Ind.
B. T. Baldwin, Marion, Ind.
Chas. Hill, Mt. Healthy, O.
J. F. Michael, German, O.
E. H. Collins, Mattsville, Ind.
Geo. W. York, Chicago, Ills.
J. W. McKinnev, Camargo, Ills.
E. Whittlesey, Pecatonica, Ills.
Lewis Hockett, Fairmount, Ind.
Enoch Babb, Herbst, Ind.
T. Hulman, Terre Haute, Ind.
J. C. Zimmerman, Wabash, Ind.
L. Highbarger, Adeline, Ills.
F. J. Siefert, Cincinnati, O.
A. M. Gander, Adrian, Mich.
T. W. Abbott, Noblesville, Ind.
T. L. Von Dorn, Omaha, Neb.
H. D. Cutting, Clinton, Mich.
Jno. M. Pearson, Tippecanoe City, O
W. L. Jobe, Fillmore, Ind.
W. Mason, Fillmore, Ind.
Chas. F. Muth, Cincinnati, O.
G. W. Brodbeck, Indianapolis, Ind.
F. L. Dougherty, Inoianapolis, Ind.
David Leaming, Arcadia, Ind.
Mrs. A. Cox, Whitelick, Ind.
T. F. Bingham, Abronia, Mich.
Aaron Benedict, Bennington, O.
Prof. N. W. McLain, Aurora, Ills.
T. P. Andrews Farina, Ills.
Sylvester Johnson, Irvington, Ind.
Mrs. C. Robbins, Indianapolis, Ind.
James Forncrook, Watertown, Wis.
G. S. Mann, Preston, O.
D. C. Smith, Lewisville, Ind.
Dr. C. C. Miller, Marengo, Ills.
M. G. Reynolds, Williamsburg, Ind.
A. I. Root, Medina, O.
B. J. Miller, Nappanee, Ind.
Samuel King, Jr., New Paris, O.
I. N. Cotton, Traders' Point, Ind.
Mrs. W. N. Voorhis, Irvington, Ind.
Mrs. Adell Crandall, New Bremen, Ills.
N. N. Betsinger, Marcellus, N. Y.
E. S. Armstrong, Jerseyville, Ills.
W. Z. Hutchinson, Rogersville, Mich.
Ora Knowlton, New Brunswick, Ind.
R. L. Taylor, Lapeer, Mich.
J. W. Sears, Harrodsburg, Ind.
J. J. Martin, North Manchester, Ind.
L. Murphy, Terre Haute, Ind.
F. S. Comstock, North Manchester, Ind.
A. T. Kelly, Franklin, Ind.
W. O. Titus, Toledo, O.
Jonas Scholl, Lyons' Station, Ind.
S. H. Lane, Lebanon, Ind.
J. F. Coffin, Westland, Ind.
D. C. Deupree, Edenburg, Ind.
Solomon Hathawav Muncie, Ind.
J. R. McConnell, Needham, Ind.

After the short intermission the convention was again called to order, and the President appointed the following committees:

Finance.—C. P. Dadant and Prof. N. W. McLain.

Resolutions.—R. L. Taylor, T. L. Von Dorn, and Mrs. C. Robbins.

Exhibits.—C. F. Muth, Frank L. Dougherty, and E. O. Tuttle.

Printing.—Rev. W. F. Clarke, W. Z. Hutchinson, and Dr. A. B. Mason.

The convention then adjourned until 2:30 p.m.

AFTERNOON SESSION.

At 2:30 p.m. the convention was called to order by President Cutting, after which he delivered the

PRESIDENT'S ANNUAL ADDRESS.

Bee-Keepers of North America:—It is a pleasure to meet so many earnest workers here to-day, and we should be thankful to the Giver of all good, that we are permitted to again meet our many friends. While we miss many familiar faces at this meeting, and learn of the misfortunes that keep many away, we have every assurance that they are with us in mind, if not in body.

We who have been permitted to meet here to-day, have many things to be thankful for. Your committee of arrangements have been untiring in their efforts to make it pleasant for you all, and give you a hearty welcome. Our Corresponding Secretary, Mrs. Robbins, will long be remembered by those assembled here, for the beautiful badges which she has provided you, and may you ever preserve them as a memento of this happy meeting.

No cloud of discord darkens our horizon, and to-day the North American Bee-Keepers' Society is in a position where great good can be accomplished. During the past year I have often thought of "what could be done that would be of material benefit to this society." I would like to see this society publish each year a volume of at least 300 pages, containing the best writings of our many contributors. If we, as a society, could do this, we would soon march onward from our 125 members to as many thousands; it would add greatly to our standing and usefulness at home and abroad. To do this would require a secretary of good executive ability, and he would have to be paid a stated salary for his services. Many of our State horticultural societies are conducted on this plan. Michigan, each year, issues a volume of from 400 to 600 pages. The printing is done by an appropriation from the State, but the entire work is compiled by the efficient Secretary, Chas. W. Garfield. This is only the work of one State, while ours would be the work of an International Society, adding very much to its usefulness and importance.

I can see where our bee-periodicals and publications of kindred character can be of great use to this society on this point. I feel that each and every one of them would extend to this society every courtesy possible, and become identified in this work.

Right here let me thank, yes heartily thank, our fraternal publishers for the many courtesies extended to this society, not only the past year, but for many years, for their great help in publishing all of our notices and proceedings without any expense to this society. If you will excuse me, I must make mention of one case in particular. At the meeting of this society last year, at Detroit, Thomas. G. Newman, editor and publisher of the AMERICAN BEE JOURNAL, with his usual liberality, offered to publish in pamphlet form the proceedings of that meeting, to which he added a brief history of this society up to and including the Detroit meeting. It would be useless for me to tell you of the usefulness of this work; to me the past year it has been my *Vade Mecum*. Upon the completion of this work the executive committee purchased 200 copies, and the Secretary has mailed to each member and others a copy.

Mr. Newman then *presented* to this society, through its President, 50 copies to be used where it was thought they would do the most good. Your chairman has sent a copy to every Agricultural College in in the States and Canada, where he could obtain the required address; also to many of our horticultural and agricultural societies and papers. I cannot speak in too much praise of the noble example of our good Brother Newman, and I earnestly recommend that this society, before the close of this convention, tender to Brother Newman many thanks for his kindness and liberality.

I cannot close without again calling your attention to this matter of publication. Such articles as are published in the AMERICAN BEE JOURNAL for this year, page 261, entitled, "Medicinal Properties of Honey," by Dr. G. P. Hachenberg, Austin, Texas; also an article on page 262, "Opposition to Bee-Keeping," by C. G. Beitel, Easton, Pa., should be read by every apiarist in North America. The dissemination of knowledge regarding our pursuit must place every legitimate bee-keeper on a higher plane, and bring our industry to the front, and place it side by side with other recognized pursuits.

I would respectfully urge upon the Vice-Presidents of this society the necessity of corresponding with the secretaries of their respective State agricultural societies and submit to them a premium list for bees and honey and necessary appliances. The Michigan State Agricultural Society gives, by way of encouragement to a growing industry, a premium list amounting to $300, the largest of any State that I have any knowledge of. After giving this matter close and careful attention for several years, I am fully convinced that we can do much good to an over-burdened market by making judicious exhibits of our products. The State and County fairs held by the different societies are great helps in this direction. I do not believe in "one idea exhibitions," so I will leave it with our energetic and intelligent fraternity how those exhibitions should be made to accomplish the greatest good. Many thanks are due to those who, being unable to attend the different exhibitions, have contributed articles of interest for exhibition.

I sometimes think many of us do not fully understand or realize the importance of a Bee-Keepers' Union. I look for some action on the part of its managers at this meeting, that will properly place the Union before the members of this society, that they may fully understand its objects and requirements.

You will soon be called upon to elect officers for another year; on retiring, allow me to thank you for the many courtesies extended to me as your presiding officer.

Mr. Thos. G. Newman moved that the address of the President be referred to a committee of three for consideration, and to report upon the advisability of the adoption of the many recommendations therein made. This was adopted, and Dr. C. C. Miller, A. I. Root, and C. F. Muth were appointed such committee.

The next essay on the programme was "Bee-Studies," by Prof. A. J. Cook; but he was not present, and as the subject required many illustrations, he declined to send it.

The following is the essay of Mr. Jno. Aspinwall, of Barrytown, N. Y.,

APICULTURAL JOURNALISM.

A great factor in the business of bee-keeping is the source of knowledge by and through which we acquire the ability to successfully carry on this most interesting pursuit, a pursuit which requires all the nerve, the perseverance and skill a man can bring to bear upon it. Those who have not tried it may say, "My friend, you seem to think a bee-keeper must possess unusual powers of mind and skill of body, and that he must couple these to a bodily control which savors of higher things than mere bee-keeping."

"Yes," I say, "a successful bee-keeper is a very skillful man, both in mind and body."

"Well, my friend, where does he acquire his knowledge and skill?" says he.

"First in books and periodicals for theoretical knowledge, then with a bee-keeper or alone in an apiary for the practical skill," I answer.

Who can gainsay that our bee-keeping periodicals have not played a *most important role* in the development of bee-keeping in America, where the pursuit stands ahead of all the world?

I do not propose to enter here into a history of apicultural journalism, for there are present those who know more regarding that subject in five minutes than I do in a week, but I simply desire to present to you some of the effects produced by our periodicals, and also humbly advance my views as to the standard to which our bee-literature should attain. Two essentially different classes of work have been performed by them. First, disseminating the knowledge acquired by many minds through years of toil and close observation; second, by advertising those implements which are the outgrowth of that study and observation.

Bee-books are all very well in their way, but the bee-keeper wants more than that, he wants new ideas. Perhaps the methods set forth in the book he has, may not suit his particular locality, but by-and-by there will come in his bee-paper, an article from some close observer and skillful apiarist that will just "hit the nail on the head." We have almost all been through just such an experience, I think.

America stands ahead of all the world in bee-keeping. Look at her array of bee-papers! It is greater than all the rest of the world combined—two weeklies, one semi-monthly, and three monthlies, to say nothing of numerous other periodicals that combine bee-keeping with something else. To say that we have a greater number of apicultural papers, and to say we are in advance of all the world in our art, means one and the same thing. Now comes the question, "What should a bee-publication be like?" Well, first of all it should not be run by or in the interest of a clique or ring, but should be governed entirely by the interests of two parties, first, the subscriber, and second, the publisher. It would be desirable not to have it connected in any manner with the supply business, but experience has proved that there is not sufficient profit in a publication alone. The writer has still a vivid recollection of the scene at the North-eastern Convention at Syracuse, some three years or so ago, when the *American Apiculturist* was put up as the official organ of that body, because it was not backed up by a supply business, and consequently said to be run in the interest of bee-keepers; how your humble servant claimed that the *Bee-Keepers' Magazine*, as well as *Gleanings*, were in their interests, though connected with the supply business, and that the day would come when all bee-papers would be backed up by a supply-business; how, when he made this prediction, they poured upon his head the vial of their wrath and ridicule. But oh, he had a sweet revenge, for to-day every bee-paper in this country is connected directly with supplies.

Great care should be used by the editors to see that they do not allow this feature to make them prejudiced. Controversies should be confined to something besides personalities.

I firmly believe the day will come when we will discard this "brother" business. It is not manly, and half the time it is absolutely hypocritical. Bee-keeping is not a *play* business, it is a legitimate industry, and it would be as ridiculous for our horticulturists, agriculturists, and stock growers, to "brother" themselves through the press as it is for us to do it.

I believe that publishing extracts from other bee-papers a capital feature, and I believe a very successful bee-publication could be conducted by having only two departments, viz: clippings for one, and questions and answers for the other; for in the first, by careful selections you get the cream of all the bee-literature in the country, and in the second, information can be gained on particular cases. Original matter is first-rate very often, but a good deal we read, or rather glance at, is of no interest except to the writer, and he knew all about it before he wrote it. I would beg you to have charity for one who deliberately sets up his opinion before so many older and wiser heads, but I offer an excuse, viz: that apicultural journalism is a subject in which I am intensely interested and I think I see the day not far off when our industry will receive the consideration which its importance so justly deserves—and why should I not be interested?

What has apicultural journalism done in this country besides instructing bee-men? It has done what was supposed to be an absolute impossibility—it compelled probably one of the largest, if not *the* largest honey-house in the world from continuing the nefarious practice of honey adulteration—a house from which the practices of honey adulteration spread throughout the land, and yet one, yes, gentlemen, only one bee-keeping monthly stood up and made that fight, and it fought until to-day in the pages of that magazine you can see how the practice has been stopped—that they will never more spoil our industry, by putting vile glucose upon the market in contact with honey. Who dare say that the bee-keeping press has no power?

Gentlemen, I am proud of being connected with the magazine that fought that good fight, namely, the *Bee-Keepers' Magazine*. Do you not know that another bee-paper, the oldest journal of the kind in the land, the good old AMERICAN BEE JOURNAL, has worked to such a good purpose that at present there are joined together in close union a set of determined men who will not see our industry trampled upon, who will fight every just claim to the end, and what is more, will see justice meted out as it should be? Do you now dare say that apicultural journalism has no influence and strength? No, I say; there is power, there is strength in our magazines and journals, and may God grant it shall never be turned to any evil purpose.

Mr. Thomas G. Newman then read the following essay, entitled,

BEE-LITERATURE.

This subject was assigned to me, without stating whether it was to be treated historically or otherwise, but I presume it was intended that I should get down to dry facts, and give a condensed history of bee-literature. The subject will very naturally be very monotonous, and if you go to sleep over it, I can console you with the thought that it has taken many hours from my sleep to dig out the brief history here presented, and if you catch the sleep which I had to forego to prepare this essay, you are welcome to it.

Ages before the creation of man on this planet, the flowering plants demanded insect fertilization, and doubtless the bee was there to scatter the pollen masses, fertilize the flowers and gather the honey. Then there were no sheep-bee lawsuits, nor controversies concerning bees and grapes. These "luxuries" are a modern invention, and belong to the nineteenth century.

The writers of the Bible tell us of the early races of bees, and describe the "land flowing with milk and honey." The records of the Egyptians and the Chinese, cut in stone, show that bees were known to them as faithful servants that gathered the sweets of the earth for their use. Three hundred years before the Christian era, Aristotle affirmed that the bee was "a magazine of all the virtues," and Virgil, the noted Latin poet, calls it "a ray of divinity." Shakespeare and Milton devoted to it their thoughts and words of praise.

It was estimated, over three hundred years ago, by De Montfort, who then wrote a work on bees in French, that between 500 and 600 authors had preceded him on the subject of bee-keeping. Most of the books were written in Latin, and are lost to the world; and but few have been handed down to us.

I will briefly enumerate some of the books on bees and bee-culture published in the English language:

Charles Butler, at Oxford, in A. D. 1609, gave to the world an octavo work entitled, "The Feminine Monarchie; or the Historie of Bees, and the Right Ordering of Them." The second edition of this work, a quarto, was published in London, in 1623.

In 1623, at London, was published "The Husbandry of Bees, with their Several Uses and Annoyances," by Wm. Lawson.

In 1630, John Levett's 8vo was published in London, and the title was "The Ordering of Bees."

In 1637, in London, was published Richard Remnant's quarto, entitled "The History of Bees."

In 1655, the "Reformed Commonwealth of Bees," by Samuel Hartlib, appeared in London, in quarto form.

In 1657, a quarto appeared in London by the Rev. Samuel Purchas, with this imposing title: "A Theater of Political Flying Insects: wherein especially the nature, the worth, the work, the wonder and the manner of right-ordering of the bee is discovered and described. Together with discourses historical, and observations physical, concerning them."

In 1675, John Gedde's 8vo appeared in London, entitled "Method of Bee-Houses and Colonies," and in 1721 his work entitled "The English Apiary; a Complete Bee-Master" was published, also an 8vo, and published at the same place.

Joseph Worden wrote a book which was also published in London, with plates, 8vo, in 1676, and its title read thus: "Apiarium, or a Discourse of Bees: tending to the best way of improving them, and to the fallacies that are imposed by some for private lucre on the credulous lovers and admirers of these insects." In 1680, another 8vo appeared in London, by the same author, entitled "A Further Discovery of Bees."

In 1691 a 12mo was published in London, written by John Worlidge, entitled "Apiarium; or a Discourse of the Government and Ordering of Bees; their Nature and Properties."

Two years later, in 1693, appeared a quarto, in London, by Edmund Southerne, bearing this title: "A Treatise Concerning the Right Use and Ordering of Bees: Newlie made and set forth according to the author's own experience: which by any heretofore hath not been done." Mr. Southerne appeared to think that he was the first author on bees who had written out his experience. This closes the list for the seventeenth century.

The authors on bee-keeping in the eighteenth century begin with Joseph Warder. At London, in 1712, his 18mo, consisting of 166 pages, was given to the world, and its title read thus: "The True Amazons; or, The Monarchy of Bees: Being a new discovery and improvement of those wonderful creatures. With directions 'plain and easy how to manage them, both in straw hives and transparent boxes; so that with laying out of but £4 or £5, in three or four years, if the summers are kind, you may get £30 or £40 per annum.'" This work was the first to contemplate bee-culture as a business, and as a result nine editions were published; the last of which appeared at London in 1765.

Then came an 8vo of more imposing proportions; containing 468 pages, and being illustrated with twelve copper plate engravings. It was by R. A. F. Reaumur, and was translated from the French by N. Bazin, and published in London in 1744. Its title reads thus: "The Natural History of Bees: containing an account of their production, their economy, the manner of their making wax and honey, and the best methods for the improvement and preservation of them." As a scientific work, this is still held in high repute.

In the same year, 1744, an 8vo was published, with copper-plate engravings, containing 208 pages, by the Rev. John Thorley. It was a plea for the bees, and condemned the brimstone pit, as is shown by its title, which was as follows: "Melisselogia; or, The Female Monarchy: Being an inquiry into the nature, order and government of bees, those admirable, instructive and useful insects. With a new, easy and effectual method to preserve them, not only in colonies, but common hives, from that cruel death to which their ignorant, injurious and most ingrateful owners so commonly condemn them. A secret unknown to past ages, and now published for the benefit of mankind. Written upon forty years' observation and experience." A second edition of this work was published in 1765.

In 1750, at Edinburgh, "The Practical Bee-Master, by Robert Maxwell, was published: 12mo; 138 pages.

In the same year as Mr. Thorley's second edition came out, another progressive step was pointed out by Stephen White, in the manner of taking the honey in bee-boxes, etc. That was an 8vo, and was published in London in 1756, and its title reads thus: "Collateral Bee-Boxes: or a new, easy and advantageous method of managing bees, in which part of the honey is taken away in an easy manner, without destroying or much disturbing the bees; early swarms, if desired, are encouraged, and late ones prevented."

In 1758, the noted work of John Swammerdam, M. D., was published in London, entitled, "The Book of Nature; or, The History of Insects: It was translated from the Dutch and Latin, by Thomas Floyd. Seventy-eight pages of this elaborate folio, and ten copper-plate engravings are given to 'Treatise of Bees; or, an accurate description of their origin, generation, sex, economy, labors and use." This is a standard work, and is much quoted by all modern authors.

John Mills, F.R.S., wrote a work of 158 8vo pages, which was published in London in 1766. Its title was: "An Essay on the Management of Bees: wherein is shown....that the practice of saving their lives when their honey and wax are taken from them was known to the ancients, and is, in itself, simple and easily executed."

In 1768, a quarto appeared in London containing 176 pages, with copper-plate engravings. It was the celebrated work of Thomas Wildman, entitled: "A Treatise on the Management of 'Bees: wherein is contained the natural history of those insects; with the various methods of cultivating them, both ancient and modern, and the improved treatment of them." A second edition was published in 1779.

"A Complete Guide to the Mystery and Management of Bees" was the title of an 8vo by William White, published in London in 1771.

In 1777 was published in London an octavo, written by John Debraw, entitled "Discoveries on the Sex of Bees: explaining the manner in which their species is propagated; with an account of the utilities that may be derived from these discoveries by their application to practice."

Then comes the works of John Keyes, the first of which was an 8vo, and was published in London in 1780, entitled: "The Practical Bee-Master: in which is shown how to manage bees, either in straw hives or in boxes, without destroying them, and with more ease, safety and profit than by any method hitherto made public." The next was a 12mo of 272 pages published in 1796, and was entitled, "The Ancient Bee-Master's Farewell: or full and plain directions for the management of bees to the greatest advantage; declaring further improvements, etc." In 1814 another was issued, which was but little more than a re-print of the last-named, though its title read, "A Treatise on the Breeding and Management of Bees to the Greatest Advantage." This was a 12mo, and contained 272 pages.

In 1783 an octavo was issued, written by Byran J. Bromwich, entitled, "The Experienced Bee-Keeper: an essay on the management of bees."

In 1795 an 8vo was published in London; the author being James Bonner, and its title was, "A Plan for Speedily Increasing the Number of Bee-Hives in Scotland."

In 1799, a 12mo was issued in London, written by John Isaac, entitled "The General Apiarian: wherein a simple, humane, and advantageous method of obtaining the produce of the bees, without destroying them, is pointed out."

This completes the eighteenth century. The nineteenth is commenced by an anonymous publication in London of an 8vo, entitled "Comfort to Aristeus: or a few useful hints on the management of bees, so as to render honey and wax a cheap and plentiful commodity, etc."

Then came, in 1806, the famous work of Francis Huber, published in London, 12mo, and entitled: "New Observations on the History of Bees," which was translated from the French.

From 1806 to 1813 a poem in 3 parts, 297 pages, was published at Shrewsbury, entitled, "The Bees."

This was followed, in 1815, by a book of 395 pages, by Robert Huish, and published in London, entitled, "A Treatise on the Nature, Economy and Practical Management of Bees, in which the various systems of apiarians are examined, etc." In 1844 another edition was published containing 458 pages.

In 1821, at London, was published an anonymous poem, entitled "Monarchy of Bees;" 29 pages, 12mo.

In 1825, a 12mo of 112 pages entitled "The Practical Apiarian," by George Strutt, was published.

In 1827, at Edinburgh, was published an 8vo, entitled "Apiarians' Manual," by T. M. Howatson.

In 1827, "The Honey-Bee: its Natural History, Physiology and Management" made its appearance in London. It was by Edward Bevan, and the first edition contained 404 pages. Another edition was published in 1838.

In Boston, Mass., was issued a 12mo in 1829, of 164 pages by James Thacher, M. D., entitled, "A Practical Treatise on the Management of Bees: with the best method of destroying and preventing the depredations of the bee-moth."

And in the same place in 1831, was published an 18mo of 106 pages, by Jerome V. Smith, M. D., entitled, "An Essay on the Practicability of Cultivating the Honey-Bee in Maritime Towns and Cities."

In 1833, at London, a 12mo of 71 pages appeared, entitled, "The Apiarian's Guide," by J. H. Payne.

In the next year, 1834, appeared in London a 12mo with 40 wood cuts, entitled "The Management of Bees," with a description of the "Ladies' Safety Hive," by Samuel Bagster, Jr.

In 1835, in New York, was published a small pamphlet by Francis Kelsey, entitled "A Practical Treatise on the Management of Honey-Bees."

In the same year, Thomas Nutt issued a 12mo in Wisbech, of 269 pages, the sixth edition of which was published in London in 1846, consisting of 340 pages, entitled, "Humanity to Honey-Bees: or practical directions for the management of Honey-Bees upon an improved humane plan, by which the lives of bees may be preserved, etc."

Then in 1839 came "The Cottager's Bee-Book" by Richard Smith.

In 1840, in Boston, Mass., an 18mo of 128 pages, was issued by John M. Weeks, entitled "A Manual: or an easy method of managing bees, with infallible rules to prevent their destruction by the moth."

In the same year a pamphlet of 48 pages was issued in New Haven, by Wm. M. Hall.

And James Duncan, in Edinburgh, in the same year wrote a book entitled "The Natural History of Bees."

In 1842, J. Wighton issued a 12mo in London, under the title of "The History and Management of Bees."

W. C. Cotton, in 1842, issued an 8vo with plates, called "My Bee-Book," and in 1843 a 12mo, "Two Letters on Bees."

In 1842, at London, was published from the *Quarterly Review* a pamphlet of 53 pages on "Bees and Bee-Books."

"The Practical Bee-Keeper," an 8vo was issued in 1843 by J. Milton; and in the same year in Edinburgh, W. Dunbar, issued a 12mo entitled "Bees."

In 1846 Thomas R. Allen published in Syracuse, issued the "Bee-Cultivator."

In 1830, H. Taylor issued his "Bee-Keepers' Manual;" 126 pages.

Then followed W. A. Munn's "Bar and Frame Bee-Hive Described."

In 1845, at London, was published a 12mo, entitled "Bee-Keepers' Manual," by D. Chylinski.

In 1847 a pamphlet of 103 pages was published at Dublin, entitled "The Hive and Honey-Bee," by H. D. Richardson, with engravings.

In 1848 E. Scudamore issued a 12mo in London, entitled "Artificial Swarming of Bees."

In 1848, at New York, a book of 162 pages was published, entitled, "Practical Treatise on Humanity to Honey-Bees," by Edward Townley.

Then in London in 1848, appeared a 24mo without name, entitled, "Hand-Book on the Honey-Bee."

In 1848, at London, was published "Golding's Shilling Bee-Book;" 68 pages.

In New York, T. B. Miner published "The American Bee-Keepers' Manual" in 1849, consisting of 349 pages, and in 1851 his pamphlet appeared, entitled, "An Essay on the Winter Management of Bees."

In 1851 an anonymous publication was issued in Philadelphia, of 126 pages, entitled "The Hive and its Wonders," and another in New York, of 119 pages, entitled "The Cottage Bee-Keeper," by a country curate.

And in 1852 an anonymous 8vo "The Honey-Bee," appeared in London.

The Rev. L. L. Langstroth, in 1853, published a 12mo of 384 pages in Northampton, entitled "The Hive and Honey-Bee;" and the second edition was published in New York, in 1857, consisting of 534 pages.

In 1853, in New York, was published a 12mo, consisting of 376 pages, by M. Quinby, entitled "The Mysteries of Bee-Keeping Explained; being a complete analysis of the whole subject." A new edition entitled "Quinby's New Bee-Keeping," was published in 1880.

The same year (1853), the Rev. J. G. Wood issued an illustrated 12mo of 114 pages, in London, entitled "Bees: their habits, management and treatment."

In 1854, Henry Eddy issued in Boston a 12mo of 60 pages entitled "Eddy on Bee-Culture and the Protective Bee-Hive."

In 1855, in New York, was published "The Bee-Keepers' Chart," by E. W. Phelps.

In 1856, in London, a 12mo of 112 pages was published, "The Bees and White Ants; their Manners and Habits:" with illustrations of animal instinct and intelligence. From the Museum of Science and Art; with 135 illustrations, by D. Lardner, D.C.L.

"The Bee-Keepers' Text Book," by H. A. King, was published in New York in 1860, in English and German, and passed through many editions.

In 1861 a book of 440 pages was published in San Francisco, Calif., with 80 illustrations, entitled "The Bee-Keepers' Directory; or the Theory and Practice of Bee-Culture in all its Departments," by J. S. Harbison.

In 1865 "The Apiary; or, Bees, Bee-Hives and Bee-Culture," by Alfred Neighbour, was published in London. It contained 350 pages, and was extensively illustrated.

In 1867, at Buffalo, N. Y., was published a pamphlet of 64 pages, on "The Triangular Bee-Hive and Practical System of Bee-Keeping," by T. F. Bingham.

Quite a number of small pamphlets were issued about this time, to illustrate some hive or invention, but our space forbids their enumeration.

In 1870, at Edinburgh, a 12mo of 193 pages was published, entitled "Handy-Book of Bees," by A. Pettigrew.

In 1870, "Annals of Bee-Culture," by D. L. Adair, was published.

In 1872, E. Kretchmer, of Coburgh, Iowa, published a book of 250 pages, entitled "The Bee-Keepers' Guide."

In 1873, at Mt. Gilead, O., was published a pamphlet of 128 pages, entitled "The Honey-Bee; its habits, culture, and management," by Aaron Benedict.

In 1875, the "North American Bee-Keepers' Guide," by J. M. Hicks, containing 104 pages, was published at La Fayette, Ind.

In 1875 John Hunter, of London, England, published a 12mo "Manual of Bee-Keeping," which, in 1879, was enlarged to 218 pages in the third edition.

In 1876, at Chicago, Ills., was published a translation of "The Dzierzon Theory, as set forth by the Baron of Berlepsch;" 48 pages.

In 1876, a 50-page pamphlet was published at Appleton, Wis., entitled, "Fifty Years of Bee-Keeping," by A. H. Hart.

In 1876 Prof. A. J. Cook published a pamphlet called "The Manual of the Apiary," which, in 1878, reached its second edition with 286 pages, and 112 illustrations, and was published in Chicago.

In 1877, at Medina, O., was published a large 8vo of about 300 pages, entitled "A B C of Bee-Culture," by A. I. Root. It was nicely illustrated, and has passed through many editions.

In 1878 appeared a 12mo in New York, entitled "The Blessed Bees," by John Allen; 178 pages.

In 1878, a 32-page pamphlet was published at Chicago, Ills., entitled "Honey as Food and Medicine," by Thomas G. Newman, in both English and German.

In 1879 a pamphlet of 80 pages, entitled "Bee-Culture," was published in Chicago, both in English and German, by Thomas G. Newman, and in 1880, a second edition, enlarged to 200 pages, and entitled "Bees and Honey or Management of an Apiary for Pleasure and Profit" was published.

In 1881, "The British Bee-Keepers' Guide Book" of 136 pages, by T. W. Cowan, was published in London.

In 1881, at London, appeared an anonymous pamphlet of 80 pages, entitled "Modern Bee-Keeping; a handbook for cottagers."

In 1881, at Chicago, Ills., was published "The Hive I Use," by G. M. Doolittle, describing his management of bees.

In 1881, at Cincinnati, O., was published a 24mo of 36 pages, entitled "Practical Hints to Bee-Keepers," by C. F. Muth.

In 1881, at Hamilton, Ills., was published a 24-page 8vo, entitled "Extracted Honey; Harvesting, Handling and Marketing," by Dadant & Son.

In 1882, at Youngstown, O., was published by A. R. Kohnke, a 14-page 12mo, entitled "Foul Brood; its Origin, Development, and Cure."

In 1882 Sir John Lubbock's 12mo of 448 pages was published in London, entitled "Ants, Bees and Wasps," giving many experiments with bees.

In 1882, in Salem, Mass., was published an 8vo, entitled "The Bee-Keepers' Handy Book," by Henry Alley; 270 pages.

In 1883, in London, a 12mo was published, entitled "Dzierzon's Rational Bee-Keeping." It is a translation of his German work, with notes by C. N. Abbott.

In 1884, at Chicago, Ills., was published a 30-page 12mo, entitled "The Cause and Cure of Foul Brood (or Bacillus Alvei), by Frank Cheshire.

In 1884, the Rev. George Raynor, M. A., published in London a 24-page pamphlet, entitled "The Ligurian Queen-Bee; her introduction to alien stocks, and the best means of pure propagation."

In 1884, at New Concord, O., was issued a book of 172 pages, entitled, "Bees for Pleasure and Profit," by Rev. Wm. Ballantine.

In 1884, was published at New York, a "Dictionary of Practical Apiculture," by John Phin. It contains 80 pages.

In 1885, at Dowagiac, Mich., an 8vo pamphlet of 128 pages was published, entitled "Success in Bee-Culture, as Practiced and Advised," by James Heddon.

In 1885 "The Australasian Bee-Manual" was published in Matamata, New Zealand, by Isaac Hopkins. It is an 8vo, and contains 336 pages, and is illustrated.

In 1886 a 16mo of 114 pages was published in Chicago, Ills., entitled "A Year Among the Bees," by Dr. C. C. Miller.

In 1886, at London, appeared a 64-page 12mo, entitled "Simmins' Original Non-Swarming System."

In 1886, at Mt. Vernon, Iowa, was published a 12mo of 16 pages, entitled, "How to Raise Comb Honey," by O. Foster.

In 1886, at New York, was issued a 12mo of 134 pages, entitled, "Buz, or the Life and Adventures of a Honey-Bee," by Maurice Noel—a Novelette.

In 1886, at Beeton, Ont., appeared a poem by the Rev. W. F. Clarke, entitled "A Bird's-Eye View of Bee-Keeping." It contains 60 pages, and is all in rhyme.

In 1886, was issued the first volume of a 12mo, entitled, "Bees and Bee-Keeping," by Frank Cheshire, F.L.S., London, England. It contains 336 pages.

In the line of periodicals devoted to bee-culture, there is quite enough for another essay, and as this is already too long, even though condensed as much as possible, let the Periodical Literature be a subject for another time.

The books enumerated do but represent "mile-stones" upon the highway to progress towards the goal to which we are all journeying; and in mentioning them, we are reminded that we are only a "small detachment" in the grand army of apiarists the world over. In the French, Italian, German and Russian languages many more books have been published than in the English language. They are all workers in the same enchanting pursuit.

Dr. C. C. Miller moved that a vote of thanks be accorded Mr. Newman for his valuable essay. Adopted with applause.

Mr. C. F. Muth then followed with his essay on

SUCCESS IN BEE-CULTURE.

Success in life is our object-lesson from childhood. We were taught to be industrious, saving, persevering, and prudent in order to accomplish the object. It is not my intention to-day to give you any essay on success in life nor success in business, as these are matters which are not only taught, but lay within us to a great extent, and are often determined by surrounding circumstances, and our individual sagacity, of making use of them. My object to-day is to give you my own manner of manipulating an apiary by which the largest crop of honey may be produced with the least expense and the least loss of time.

I have kept bees for the last thirty years or more, and the average number of colonies I commenced each season with, for the last 25 years, was between 45 and 50. Being in the mercantile business I had the chance, almost every spring, of selling all the bees I meant to dispose of, which I did. My wintering during all this time was as successful as that of the best of my neighbors, and none of them produced larger crops of honey in proportion. I should have, therefore, an idea of bee-keeping, if I am no specialist.

A successful wintering of the bees is one of the foremost requirements of the coming crop. The subject having been discussed by a number of able writers, I shall not dwell upon it now, but will state that success depends upon a strong healthy colony in the fall, plenty of honey and dry comfortable quarters. Honey and pollen are the natural food of the bee, and the most wholesome, unless our negligence or ignorance causes them to decompose, and when, then, they act as a poison, we should blame ourselves only.

We know that the strongest colonies, at the beginning of the honey season, will give us the largest results. Most of us have the experience that a strong colony had collected 150 pounds or more of honey while the product of its next neighbor, a pretty strong colony also, was not more than 10 or 20 pounds. The difference in the strength of the colonies was the sole reason for the different results.

"What shall I do to coax my bees into the honey-chamber?" This innocent question has brought out a number of ridiculous answers. My answer would have been: Build your brood-chamber up by having it strong in brood and bees, and then pray for a yield of nectar. Without a strong colony there will be no crop, and unless the blossoms yield, there is no honey forthcoming. If we acquaint ourselves with the laws of nature, we shall not commit the folly of "coaxing."

The largest crop of honey being our object, we want a large brood-chamber the capacity of which accommodates the laying capacity of a good prolific queen as near as this is possible. We want a large surface *above* the brood-chamber, for we know that bees store most readily their honey above their brood. The 10-frame Langstroth hive suits me best, as it affords room enough for most prolific queens, providing we manage to have the 10 frames filled with brood. All frames filled partly with brood and honey should make room, in due time, for empty combs, and be used to strengthen weak colonies. Wishing to avoid all "coaxing," no honey-chamber is put on any one of my hives until the lower story has every comb filled with brood. Exceptions are indulged in only during poor seasons when we have to save our combs from the moth, and "coaxing" is out of the question.

It being my object to get my colonies strong as early in the spring as possible, they were overhauled in March or early in April, and all colonies confined to as many combs as each one could well cover. As long as the weather is cool, enough honey should be between their division-boards, so as to have it within easy reach. But combs with honey placed on the outside of division-boards when the weather becomes warm, answers every purpose, and are preferable as a stimulant for breeding up to all stimulative feeding of liquids. The division-boards should not touch the bottom by about ½ inch, allowing the bees an easy passage to the other side. They should be spread in due time, and an empty comb inserted as the growth of the colony requires it. But—make haste slowly. Brood will chill in the combs during cold nights unless there are bees enough to cover it.

In order to be prosperous, bees should be crowded from the beginning of spring to the end of the honey season, and to know what is "crowded," without over-crowding, shows the standard of the bee-keeper. When the queen feels crowded for the want of room to deposit her eggs, she imparts the swarming impulse, and is among the first to leave the hive. If, however, the queen is ever so well accommodated by young queens hatching, and thereby making room for her, and yet the bees are crowded for the want of room to deposit honey, *they* create the swarming fever when the queen is one of the last leaving the hive. We know that all the honey gatherers except those in the field are gone with the swarm.

No honey will be collected for a week or two, and the honey-chamber should be placed on the new swarm as soon as hived. There is no excuse for a bee-keeper allowing a second and third swarm to issue, as it is an easy job to look over the brood-chamber on the tenth day, or earlier, and to make use of the surplus queen-cells or destroy them as the case may be.

Honey being the object, we make a mistake depending upon natural swarms for an increase, as we thereby deprive our colonies of their force of foragers during, perhaps, the best flow of honey; and if a bee-keeper does so, he shows a neglect, of which, I admit, any one of us may be guilty, or he betrays a lack of knowledge, or, perhaps, a fear of the "tail end" of the bee.

As stated above, I want a large hive and a large colony of bees. I make no early swarms, but equalize my colonies before the harvest commences, taking, however, no frames of brood and adhering bees from any colony until it is very strong, near the point of swarming, and no honey-chamber is put on until the 10 frames of the brood-chamber are filled with brood. If this equalizing cannot be done with every one of my colonies before the season opens, I leave those weak colonies to fill their side combs with honey until they can be exchanged for combs with brood from strong colonies, when *their* honey-chamber is put on also. We cannot prevent queens entirely from entering the upper story, but by an observance of the above, it is the exception rather than the rule to find combs filled with brood in the upper story. When producing extracted honey exclusively, brood in the upper story does not bother us any. When comb honey is produced, a zinc division-board will prove a pretty certain preventive.

When the combs of the upper story are filled with honey, I exchange them for empty ones, and whenever a comb with brood is found, it is placed on the left side in the honey-chamber. When done with all, and extracting is over, those hives having brood in the upper story, get another overhauling. When the number of brood-combs in any one honey-chamber indicate that the queen has been neglecting her business below, the brood-chamber is looked over, and combs with honey and bee-bread, if any there be, are exchanged for combs with brood from above. Otherwise those combs with brood and adhering bees are used to strengthen up weak colonies to form nuclei, or to make colonies by division. The parent colonies are thereby not deprived of any of their foragers, as all the old bees return. My colonies made by division consist of 20 combs, if possible, containing brood and honey and adhering bees. A queen-cell or queen is given them on the following day. If the latter is the case, the new colony needs a looking over in the course of a week, or earlier, as the case may be.

The same process is gone over in the same manner when the combs are filled again, and so on to the end of the season. The result is that old colonies and new swarms are alike well provided, and that the latter gave me as much honey as any, in proportion, and natural swarms have not bothered me any. The queens having had ample chance to deposit their eggs, contract their brood-nest with the close of the season, honey takes the place of brood in the side-combs, and if the necessary winter stores are not accumulating in the brood-chamber, it is accidental and caused by the season. Extracting is never done too closely, and honey enough is left in the upper story to give each colony its full supply, and to provide for an unexpected emergency the following spring. We never calculate these combs as part of the crop of the season, as we want our bees to be self-supporting if possible.

I do not want to winter my bees on sugar syrup, and I fail to see the advantage and the good policy in doing so. It is uncertain, of course, what the next winter may bring, but as far as wintering is concerned *with* pollen or *without* it, and with natural stores, I will run a race with any one of you syrup-feeders.

With the above method I verily believe that my bees, *not* my hives, have gathered as much honey as the bees of any one of you. The interests of sugar refiners have not been benefited at the expense of bee-keepers; my neighbors do not suspicion me of producing honey from sugar syrup, and my labor has not been excessive, but has met all the requirements of my colonies. If labor and expense are worth any consideration, my apiary proves, in only a fair season, the most grateful of any of my investments.

Mr. Muth's essay was then discussed, especially the parts referring to the profits of the apiary as compared with other investments, and the spreading of the brood. Mr. Muth stated that in one of his apiaries in which he had 17 colonies in the spring, he had extracted three times, and had taken 2,600 pounds of honey. He said that this particular apiary paid better for the amount invested than did the 90-acre farm upon which the apiary was located. Mr. Muth also stated that he could easily dispose of all his crop of honey among his neighbors, at from 12 to 15 cents per pound.

Relating to the subject of spreading the brood, some thought it advisable if done at the proper time, and under the right conditions. Mr. A. I. Root said he believed that letting the colony alone would be just as well, and a great deal the easiest way. He also suggested that a very proper place to test and decide the advisability of spreading the brood would be in an apiary connected with a State Agricultural College, which every such college should have and sustain.

THE BEE OF AMERICA.

After a further exchange of ideas on the spreading of brood, the discussion passed on to the subject, "Has *Apis Americana* been reached?" It was thought that whether or not the bee of America had been reached, many had attained their *ideal bee.* Prof. McLain advised that in breeding if more attention were paid to the drones employed in the fertilization of the queens, far greater advancement could be made, and also more rapidly; that prepotency is on the side of the drone.

After some more discussion on the subject, Mr. Newman said:

Apis Americana, when translated, simply means the "Bee of America," and I am inclined to admit that some few Americans, by careful breeding and selection, have arrived at that degree of perfection which warrant them in claiming to possess their *ideal bee*—the "Bee of America." I have just visited the apiary of Mr. L. Reed, of Kent, O., and finding his apiary a model of perfection, examined his bees and their work, and I am satisfied that Mr. Reed has attained to his *ideal*. Mr. Benedict, one of the first breeders of bees in America, and the oldest member of this society now present, has attained his *ideal*, and has a frame of live bees with the queen here on exhibition. There are scores of others who *now have* "the Bee of America"—*Apis Americana*. In deciding the merits of our ideal bee, five points are essential, and may be enumerated thus: The queen must be *prolific* in order to have the hive full of bees at the proper time to gather the harvest of honey when it comes; the bees must be *industrious*, to let nothing escape their vigorous search while gathering the nectar; they must be *docile*, to allow the apiarist to manipulate them and the hive with ease and pleasure, in order to be profitable; they must be *hardy* and strong to endure the rapid changes in this very changeable climate; and they must be *beautiful* in order to secure the admiration of the fanciers of fine stock. These five points are all essential characteristics of *Apis Americana!* Yes, Mr. President, "our ideal bee" will be present at the very moment when the slumbering flower, under the penetrating dew, awakes to consciousness, and unfolds its buds to take in the first rays of the morning sun; and as so nicely pictured out by Brother Root in his A B C, our ideal bee will welcome "Old Sol" at the break of day, by dipping into that tiny fountain which distils the honey drop by drop, and with joy unbounded will bear away the sweet treasure to its cells of wax in its populous little home. The bee with these traits of character is well named *Apis Americana*—and some at least have arrived at that greatly-desired point in excellence in developing "the bee of the future."

The convention then adjourned until 7:30 p.m.

EVENING SESSION.

At 7:30 p.m. the convention was called to order by the President.

It was moved and adopted that the minutes of the present convention be printed in pamphlet form, under the same conditions as last year.

The committee on the President's annual address reported that they endorsed the President's recommendations referring to the Bee-Keepers' Union, but did not think favorably of publishing a bee-keepers' annual, of 300 or 400 pages, such as is published by agricultural and kindred societies. Accepted and adopted.

After discussing the two or three questions that had been handed in to be answered, the convention adjourned until 9 a.m. on Wednesday.

Local Convention Directory.

1886. *Time and place of Meeting.*

Oct. 21.—Southern Illinois, at Benton, Ills.
F. H. Kennedy, Sec., Duquoin, Ills.

Oct. 23.—Eureka Springs, at Eureka Springs, Ark.
Dr. S. S. Purcell, Sec., Eureka Spring, Ark.

Oct. 23.—Wabash County, at Wabash, Ind.
Aaron Singer, Sec., Wabash, Ind.

Oct. 27-29.—Western, at Kansas City, Mo.
P. Baldwin, Sec., Independence, Mo.

Nov. 24, 25.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for **9** cts. per crate. Glass 1¾c. per light, extra.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Receipts are liberal and prices vary from 10@13c. per lb. for white in sections varying from 1 to 1¼ and 1½ lbs. Many sales of good white 1-lb. sections are made at 11c. Extracted is quiet and ranging from 5@7c.

BEESWAX.—23@25c.

Oct. 13. R. A. BURNETT,
161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

McCAUL & HILDRETH BROS.,
34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Best white in 1-lb. sections, 12@13c.; dark, 10@11c., with a good supply in commission houses.

BEESWAX.—23c.

Oct. 10. M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is fair for choice comb in 1 and 2 lb. sections, which brings 12@15c. a pound in a jobbing way, according to quality and neatness of package. There is a fair retail and jobbing demand for extracted in square glass jars, while the order trade for dark grades from manufacturers is improving. Range of prices for extracted is 3½@7c. per lb.

BEESWAX.—It is in good demand, and good yellow brings readily 20c.

Oct. 9. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The market is good for all grades, and sales are large, while the supply is the same. Prices remain the same. One-pound sections, white clover, 13@14c.; dark 1-lbs., 11@12c.; 2-lbs., 11@12c.; dark 2-lbs., 9@10c.; ½-lbs., light, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5@5½c.

BEESWAX.—20@22c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.

Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted; 3¼@3¾c. for amber extracted; and 8@11c. for comb honey in 2-lb. sections; 12@13c. for 1-lb. sections.

BEESWAX.—It finds buyers at 20@23c.

Sep. 28. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Receipts are light and the market is very quiet. We quote: White extracted, 4@4¼c.; amber, 3¾c. Comb, 8½@10c. for white.

BEESWAX.—19@22c.

O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10@12½c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½c.; in cans 6@7c.

BEESWAX.—Dull at 21c. for prime.

Sep. 30. D. G. TUTT & CO., Commercial St.

Advertisements.

WANTED, an active, reliable man in every city and town in the State of Illinois to work up Councils of the American Legion of Honor, an insurance organization now having 60,000 members, and we are willing to *pay liberally in cash* for services rendered in this work. It can be performed at odd and leisure hours without interference with regular business, and is an occupation affording much pleasure to those engaged in it. For full explanation how to go to work and what to do, address

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILLS.

UNTESTED Queens at 50 cents.—Address, O. Kleinow, Opp. Ft.Wayne Gate,Detroit,Mich.
42A1t

FOR SALE.—Mammoth Red Clover and Alsike Seed. Having just finished up threshing, we offer 100 Bushels of the above. For prices address,

42A1t **J. B. MURRAY**, ADA, O.

THE CHAPMAN HONEY-PLANT,

IN accordance with a previous notice in bee-periodicals, I am now prepared to fill orders for the seed of the above plant at the following prices: ½ ounce, $1; 1 oz., $2; 2 oz., $3; 4 oz., $5; and ¼ lb., $8. One ounce contains from 1,600 to 1,800 seeds. On account of extreme drouth my stock of seed is limited an persons ordering will be served in rotation. The seed should be sown in early spring and general directions for cultivation will be given on each package.

This plant is not an obnoxious weed, but is as easily eradicated as clover. Having carefully watched its habits of growth and its honey-producing qualities for the past six years I believe those who commence its cultivation in a liberal way will be better pleased than by commencing with a small quantity of seed. It has been tested by prominent bee-keepers all the way from Vermont to Nebraska and Ontario. We refer to the report of the committee appointed by the North American Bee-Keepers' Society held at Detroit in 1885. The committee reported at the Indianapolis, Ind., convention held Oct. 12–14, and their report will be found in all bee-papers publishing the report of that convention.

Write all orders plainly and give your post-office address in full.

H. CHAPMAN,
42Atf VERSAILLES, Cattaraugus Co., N. Y.

HOW to WINTER BEES,

☞ See pages 525, 543, 558, 574, 590, 606, 621, and 637, of the American Bee Journal.
41Atf

Honey For Sale.

We have a large quantity of the best white EXTRACTED HONEY, in 200-lb. Kegs, for sale, which we will deliver on board the cars at 8 **cents** per pound. Orders solicited.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf **J. VANDERVORT, Laceyville, Pa.**

THE AMERICAN APICULTURIST

WILL be sent one year and a copy of the 3rd Edition of the Bee-Keepers' Handy-Book, on receipt of $1.50. The book contains 300 pages and 100 fine illustrations.

HENRY ALLEY,
41Atf WENHAM, MASS.

Vandervort Foundation Mill.

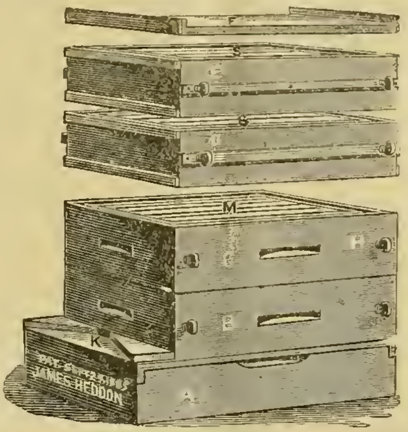
6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison-St., CHICAGO, ILL.

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

THE WESTERN WORLD

GUIDE and HAND-BOOK

OF USEFUL INFORMATION.

For HOME SEEKERS or Tourists, Capitalists or Laborers. A vast amount of information not to be found elsewhere at any price.

A cloth-bound book, 4x7 inches, 288 pages

Price, 50 Cents.

The following is only a part of the Contents:

Colored Maps of all the States and Territories, including Alaska and District of Columbia.

Diagrams showing area, population, products. Government, State, School and Indian Lands of the several States.

Histories of each of the States from the Earliest Times.

How to Acquire Lands of any kind belonging to the Government by any forms of entry who may acquire them, and the different laws,: applicable to the different sections.

Postal. Pension and Patent Laws of the United States.

Coats-of-Arms of the States and Views of Celebrated Places, and of life in different regions.

Rules for measuring Lumber, Logs, Grain, Liquids, Tables of Weights and Measures of all kinds, Interest Rules and Tables, Lumber Tables.

Systems of Land Measures in various parts of the United States.

Contains also a Million Useful Facts.

The Weekly Bee Journal, for one year, and the Guide, postpaid, for $1.30.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25**. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1A1y Agricultural College, Mich.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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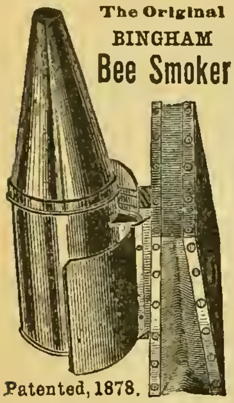

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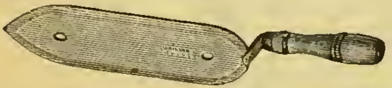

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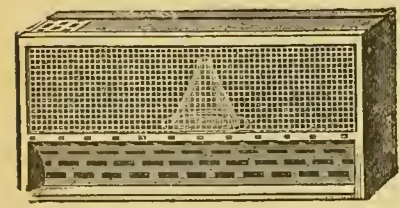

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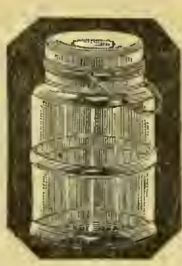

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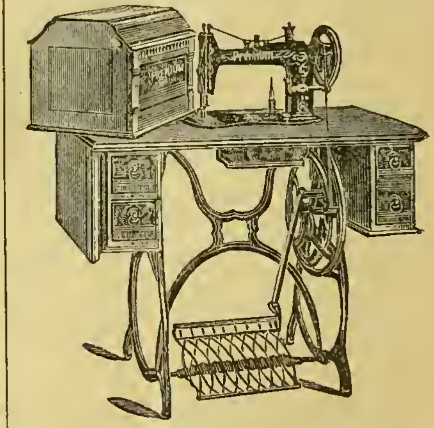

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AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Oct. 27, 1886. No. 43.

The Convention Report.—This week we give up the entire space of the BEE JOURNAL to the report of the convention at Indianapolis, believing it to be the most acceptable *news* to offer our readers. We will give a double dose of Queries next week in order to catch up.

◆

Mr. D. W. Fletcher, known to many as a correspondent for the BEE JOURNAL, died at Lansingville, N. Y., on Sept. 6, 1886. He was between 39 and 40 years of age. For sometime his health has been failing, but last June he fell from a wagon which caused internal injuries, and at last proved fatal. At an early age he became interested in Natural History, and the result was that he kept bees, and studied the art so as to excel. His honey in New York brought the highest price, especially for the holiday trade. He had a large correspondence with apiarists all over the country, whose likenesses decorated his room, and he regarded them as personal friends. He was fond of music, and played several instruments.

◆

Mr. H. H. Flick, of Lavansville, Pa., well-known to our readers for the past 25 years as an able apiarist, has been nominated for the State Senate in the 36th Senatorial District of Pennsylvania.

◆

Another Bee-Master Gone.—We regret to announce that Mr. James Anderson, of Dairy, Scotland, died on Sept. 23, 1886. Mr. Anderson was one of the most advanced bee-keepers of Scotland, and in 1882 he visited America, remaining here about a year, visiting some of our best apiarists, and studying our system of keeping bees. He twice visited the office of the BEE JOURNAL, and was designated by some as the "Bee-King from Scotland." We first met him at the "Perth Bee and Honey Show" in Scotland in 1879, and enjoyed his company with other noted Scotch apiarists. He died of congestion of the lungs after three weeks of illness.

Honey Used in Manufactures.—The possibilities in the line of honey consumption are enormous. It can be used to advantage in many manufactures, and Mr. Arthur Todd, of Philadelphia, is making a point in that line, which we are glad to see. Here is his own words in a letter just received :

> While you were at the convention, Mr. Newman, I was busy at the Burlington County Fair (New Jersey), where I made a display of honey, bees, apiarian tools, and honey manufactures. I brought strongly before the notice of the managers the necessity to encourage the use of honey in manufactures, such as preserving fruits, candies, cakes, curing hams, vinegar, etc. The result was, that the judges awarded me a special medal for *honey and honey manufactures.*
>
> As far as I am aware this is the first public recognition of the successful employment of honey in various industries.
>
> When I tell you that the cash returns for goods *made with honey* sold in the past three months by me, amount up into the *thousands* of dollars, perhaps some of the folks that see no other outlet for honey but to eat with buckwheat cakes, will think differently.

If we but mention some of the uses for honey, we fancy that many will be surprised at the *possibilities* in extending honey consumption. It is used in the manufacture of cakes, pastry, mead, metheglin, soda water, confectionery, jellies, jams, liquorice, table syrups, egg foam, vinegar, wines, liquors, preserving fruit of all kinds in the natural state, medical syrups, and medical preparations of various kinds, ointments, salves, and in making tobacco, ale, beer, and printers' rollers ; also in curing hams and meats of all kinds, besides being eaten for the cure of asthma, consumption, etc., and for food and medicine.

Mr. Todd is entitled to a vote of thanks for his endeavors to interest manufacturers in the consumption of honey. Let the good work go on ! Let us labor to CREATE A DEMAND for it in every possible way.

◆

Experiments.—Mr. J. W. Tefft, of Syracuse, N. Y., in the *News*, gives the following particulars concerning some experiments made during the past season :

> He selected one colony in the spring to experiment with, and naturally gave it the most attention ; it contained eight 10x15 frames. During the summer he has taken 26 frames of brood and honey from this colony, and formed 5 colonies of 9 frames each, besides taking 106 finished one-pound sections, and 30 pounds of honey, in frames. The 6 will go into winter quarters with 9 frames each, averaging 45 pounds of honey to the colony. The queen was given a frame of last year's comb, selected for its perfection. At 6 a.m. and at 2 p.m. of the same day, upon examination, was found she had deposited an egg in every cell on both sides, and allowing 24 cells to the square inch, she laid the remarkable number of 7,200 eggs. With another queen he has done equally as well, excepting the honey record.

◆

Paste for Labels on Pails, Jars, etc.—A correspondent asks for a good recipe for paste to hold honey-labels on tin or earthenware. Here is one : "Mix thin flour paste in the usual way. When nearly cooked, add about one-eighth as much of cheap Porto Rico molasses, and cook for ten minutes longer, stirring continually to prevent burning. If too thick to work well, it may be diluted with warm water, thoroughly mixed before using."

Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 engravings, bound in leather and gilt.

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◆

Detecting Glucose.—S. Waters & Son, of McGregor, Iowa, asks this question : "By what test can we detect the adulteration of honey with glucose ?" Here is a test which we published over a year ago :

> A cheap and easy way to test the presence of the poorer grades of glucose in honey is to put some of it into a cup of tea made strong. If it is heavily adulterated with the poisonous compound found in glucose, it will turn black almost like ink. Another test is to pour alcohol and this poisonous compound together. Pure honey and pure alcohol will unite, but pure alcohol and this poisonous compound will separate like oil and water.

As honey is so cheap it will not pay to adulterate it *now*, and hence there will be nothing offered for sale but pure honey, so long as there is no lucrative temptation. They also ask if honey put up in well-corked bottles will candy. Of course it will. In time, it will even candy in the comb.

◆

The *American Agriculturist* of New York ($1.50 a year) issues another in the series of engravings illustrating the "Homes of our Farmer Presidents," 16x18 inches in size, and presented to all subscribers for 1887. All new names for 1887, which are immediately received are entitled to all of the engravings for next year and those issued this year, also the *American Agriculturist* for the balance of this year. We will club the *American Agriculturist* with the AMERICAN BEE JOURNAL for $2 per year. Every person who immediately subscribes to receive the engravings free for next year and this year also.

North American Bee-Keepers' Society.

SECOND DAY.—WEDNESDAY.

The convention was called to order at 10 a.m., President Cutting in the chair. The meeting was then adjourned, and Dr. Miller, President of the Northwestern Bee-Keepers' Society, then called *that* society to order. It was voted that the roll call be dispensed with and that the secretary be instructed to cast one ballot for the re-election of the present officers, which was done. The society then adjourned to meet in the fall (exact date to be decided upon by the executive committee) of 1887, in Chicago, Ills.

The President of the Indiana State Society then called that society to order, and officers were elected as follows: President, Frank L. Dougherty, Indianapolis, Ind.; Secretary, Mrs. Cassandra Robbins, Indianapolis, Ind.; Treasurer, Mrs. Stout. The time of meeting is to be decided in the future. The society then adjourned, and President Cutting then called to order the North American Society, and an essay was read by Mr. C. P. Dadant, entitled,

RENDERING OF COMBS INTO WAX.

The rendering of comb into beeswax can be effected by artificial heat, or by the sun's rays. The heating on stoves or by steam is the most usual way, but many inexperienced persons spoil their wax either by melting it without water, or by overboiling, or by using dirty iron kettles. When comb is melted over a stove, it is not absolutely necessary to have an apparatus expressly made for the purpose. Any ordinary boiler will answer. A great deal of water should be used, and a moderate heat applied. When the wax is thoroughly melted, it can be dipped off the top, by using a piece of wire-cloth shaped like a dipper, hung in the kettle, to prevent the coarsest impurities from being dipped out. We have never seen any old combs, no matter how old, that did not make nice yellow wax when treated in this manner, or by the use of a wax-extractor. As a matter of course a good wax-extractor, if properly used, will give cleaner wax at the first melting.

If steam is used to melt comb, it should not be turned directly on the comb, but into the water below it, the steam often damaging the wax, and making it grainy and green looking. This same unpleasant result is sometimes attained by overboiling.

If some wax remains in the dregs, it is not advisable to throw away these residues. We have never yet seen any process that separated them so completely that they could be called worthless. Wax-bleachers usually press the wax out of them in a small press while hot. But a cheaper way, on a small scale, is to preserve them, or rather the best of them in a box, exposed to the weather, until more comb has to be melted, when they can be melted again with it. The exposure to the weather dissolves the foreign substances, but not the wax, which, to all appearances, is indestructible.

Cappings of honey are melted in the same manner as old combs. It is well, however, to work them, first, in warm water to separate the honey that is left. This sweetened water can be used to advantage in cider or wine making, and for vinegar. Honey-vinegar is the very best that is made.

We have many times heard it said that it did not pay to melt old combs, but this is a mistake. It is not advisable to melt them with nice new comb, but any apiarist who will try rational methods, can find a profit in melting the very oldest and dirtiest combs that can be found.

The heat of the sun, in rendering comb, makes the finest beeswax, as it not only melts it, but partly bleaches it, and we have to thank our Italian brothers for the first idea of this, as well as for the invention of the extractor. Thus far, however, little use has been made of this discovery, but the time is not far distant when the solar extractors will be as plentifully found as steam or stove extractors. This method will have the advantage of giving clean wax at the first melting, without any danger of spoiling it.

After the reading of Mr. Dadant's essay, the subject of which it treated was discussed as follows:

O. O. Poppleton said: The solar wax-extractor is my "baby." About ten years ago I was experimenting in wintering bees under glass, and the heat melted some wax; from this hint I made the solar wax-extractor. The melted wax running from a solar wax-extractor ought not to stand in the shade, but in the sun where it will remain melted for hours, and allow the impurities to settle, when the melted wax may be dipped off the top with a flat dipper. The heat from the sun will not injure the wax, but it gives the honey that settles at the bottom a taste or flavor of pollen. Solar wax-extractors ought not to be too large, they should be small enough so that all the combs or cappings put into them will be rendered in one day. It is the best kind of wax-extractor. I once had 500 old drone-combs, each of which were about a foot square; in rendering them I secured about one pound of wax to five combs.

C. P. Dadant—We allow our cappings to drain a long time, sometimes three or four weeks, the upper half of them is taken off, and the lower half of two "batches" is then put together.

A. I. Root—Those who have small lots of wax to render can place the cappings in a seive, when the honey can drain out into a dish-pan into which the seive is placed. After the honey has drained out, the pan and all can be placed in an oven and the wax melted.

Dr. Miller—I have an old dripping-pan with one corner broken out. This can be used as a solar wax-extractor, and when the weather becomes too cool for this, the pan can be placed in an oven and the wax allowed to run out through the opening in the pan, into a dish.

SEPARATORS.

Mr. N. N. Betsinger then gave an interesting talk about separators. He said in substance: I do not know to a certainty who first used section honey-boxes, but they were first used without separators. This manner of using them was unsatisfactory to me, and I began to devise something that would prevent the "bulge." The first substance used was glass, but many sheets broke, and many brace-combs were attached to the glass. I next used wood, and surprising as it may seem, the smoother the wood the greater the number of brace-combs attached. I next tried what is now used for separators all over the world, viz: tin. The only objection to tin is that brace-combs are attached; but the use of comb foundation largely decreased this trouble. In using half-pound sections I again dispensed with separators, and believe that my crop was thereby increased 25 per cent., but it was so badly bulged as to greatly delay its sale. I am now using a separator that is *perfect*. I have used it four years, and I do not think anything better will be discovered. It is wire-cloth, with a mesh of ¼ inch. The cloth is dipped in melted metal, which fixes the wires. It is patented. I am aware that perforated separators have been used, and there are objections to this style. They are expensive, and the perforations will show, by the way of lengthened cappings upon the surface of the comb.

T. H. Kloer—Will not the bees place propolis in the meshes where they come in contact with the sections?

Mr. Betsinger—I should think they would, but they never have with me.

It was afterwards learned that in the case in which Mr. Betsinger used the wire separators, the sections did not come in contact with the separators; the space between the separators being so great that there was room for not only the section, but for a bee-space on each side of it, between it and the separators.

The following essay by Mr. A. J. King was then read, on

FOUL BROOD.

This much hackneyed subject has appeared on the programmes of every bee-keepers' convention, county, State or National—so far as my information extends—for the past twenty-five years, or since the first organization of bee-keepers on this continent. Like all unsolved, yet important problems in apiculture, it will not "down" until the whole round of experimenting has been completed, and not even then, unless the necessary means for its cure have been discovered and successfully applied. To this noble element, in the mental "make up," characteristic of Americans, we owe the grand triumphs in science, art, and invention, which, in the aggregate, places the United States far in the "lead" of all nations on the globe. Were it not for this untiring disposition on the part of our apiarists, to seek out and corret the evils which have beset our chosen pursuit, and to render available all discoveries and appliances, both scientific and mechanical, bee-keeping would to-day be where our fathers left it thirty years ago.

In this headlong rush of improvement, as might be expected, mistakes are often made, good things are condemned, and bad ones showed into prominence; yet through the agency of a few patient and careful investigators, assisted by the great corrector —time—the truth finally emerges from the confused mass of clashing opinions all the brighter for having passed the fiery ordeal.

The subject under consideration forms no exception to this general method of treatment, but rather stands as its chief representative. Scores of theories have from time to time been propounded, all confirmed by some and exploded by others, and still our "little pets" continue to be starved, boiled and burned.

It is the purpose of this essay to suggest that probably the true theory and radical cure of foul brood has already been discovered and confirmed, but either through prejudice or faulty experiment, a suspicion of "humbug" has been cast upon it, and so, many suffering apiarists have failed to avail themselves of its kindly aid. I refer to what is known as the "phenol cure" advanced by Mr. Cheshire, of England, the details of whose extensive experiments are familiar to most apiarists. I will not detain you by attempting to enlighten you as to what foul brood is, its appearance and indescribable yet never-to-be-mistaken odor, etc., but I will recite my own personal experience and final complete triumph over it, leaving others to judge the value of the method employed.

In October, 1885, I took charge of an apiary in Cuba, numbering nearly 400 colonies in two-story hives, situated on the side of a hill and completely protected by wide, high sheds from sun and rain. The utmost cleanliness and good order prevailed in all its appointments. The high and dry country and delicious climate left nothing in outward appearance to suggest disease, and yet I found nearly 100 colonies afflicted with foul brood, fifty of which were very bad indeed. The then superintendent had for some time been boiling hives and frames, burning combs and starving the bees, but had about given up in despair, saying that he believed the disease would continue to increase until the whole apiary would be utterly destroyed. I suggested that *now* would be a fitting opportunity of testing the phenol cure, but I was assured that this cure had been thoroughly tested and found wanting; that its originator was either a humbug, or that his bees had had a different kind of foul brood.

That phenol had been used with a lavish hand was attested by numerous empty bottles bearing that label, and by others of larger size containing the liquid mixed ready for use, but that Mr. Cheshire was a humbug I could not tolerate for a moment, and the idea of two distinct kinds of real foul brood was certainly very doubtful. However, I determined on entering on my duties as "new superintendent," to give the formula of Mr. Cheshire a full and fair trial, and if successful to wait a sufficient time for the disease to reappear, if it would, before giving my experience to the bee-keeping public. I procured several bottles of pure phenol crystals, dissolved them by placing the bottle in hot water, and put one small measure full of the liquid into a tin pail, then with the same measure I added 499 parts of a mixture composed of ⅓ pure honey and ⅔ water, and made a plain mark on the inside of the pail as high up from the bottom as the liquid came, and so had a correct measure by which I could make feed rapidly.

When heated to 150°, Fahr., the bees would eat it with avidity. I placed well filled combs of this feed in open hives in all the infected places, and besides visited the bad cases regularly every three days, taking out the combs one by one and thoroughly sprinkling them with the liquid. In two or three weeks I could perceive a marked improvement, and in three months the disease had almost entirely disappeared, except in three or four mild cases, purposely left to see if they would get well without treatment. As they did not they were then taken in hand and cured.

Nearly a year has now passed, and from frequent and very recent advices direct from the apiary, I learn that it *has not* reappeared, but that the bees are in fine condition, and give promise of great results when the season for surplus again arrives. In the experiments made with phenol, before the one I have recited, the solution was entirely *too strong*, as it turned the combs red; it was used too sparingly, and lastly it was not half sweet enough, nor warm enough, and the bees would hardly eat it at all.

Foul brood is not "indigenous" in Cuba, there not being a case on record in all the native apiaries; then how could it occur in this particular apiary? From several circumstances I am led to believe that it came through queens imported from infected districts in some of the British North American provinces. I have made many experiments, and have satisfied myself that the baccilli producing the disease belong mainly to the queen's ovaries. I would like to point out cases where requeening is necessary in treating the disease, and make several suggestions, but as my essay is now longer than intended, I will close by recommending all interested to follow Mr. Cheshire's formula literally and accurately, and they will not regret it.

R. L. Taylor said: I think that the description generally given of foul brood is not correctly interpreted by some. Many think that before the bees have foul brood the combs must be full of dead brood; that the dead larvæ can be drawn out to a yard in length, and the odor so great that it can be detected by walking past the hive. Such are not the facts; at least not in the first stages of the disease. At first but a few cells of diseased brood will be found, the dead larvæ has a look resembling coffee with milk in it; it can be stretched out to the length of an inch, while the odor is not noticeable unless the nose is brought close to the brood. The larvæ shrinks and dries up until it looks like a speck of tar upon the lower side of the cell. I do not feel competent to criticise Mr. Frank Cheshire, but foul brood, in my apiary, was spread by the feeding (unknowingly) of honey taken from colonies affected with foul brood.

Wm. F. Clarke—I think that Mr. Taylor is mistaken. The genuine foul brood is of the color of coffee without milk, and it does not dry up, and the stench is so great that instead of striving to use the nose, it needs protecting.

R. L. Taylor—When the disease reaches an advanced stage, some of the characteristics mentioned by Mr. Clarke may be present. I am curing the foul brood by the starvation plan.

C. F. Muth agreed with Mr. Taylor.

Mr. A. I. Root gave a history of the breaking out in his apiary of foul brood. He thought it probable that it was brought there in honey that he had bought, to which the bees in some manner had gained access. They were taking away the combs from diseased colonies and burning the combs. They first used a tent to put over a colony when shaking off the bees, but this practice was discontinued, as flying bees that were outside the tent and belonging to the diseased colony entered other hives when unable to enter their own, and thus spread the disease. By placing the nose at the entrance of a hive, the disease could often be detected very quickly in its very earliest stages.

Rev. W. F. Clarke then read the following essay on

THE PAST, PRESENT AND FUTURE OF THE N. A. B. K. SOCIETY.

It is not my purpose to treat this theme in a way of sentiment. That has been done very skillfully by another hand, and "the harp of a thousand strings" has been touched into plaintive strains in view of the lapse of time and the passing away to "the beyond" of most of those who were prominently active in founding this organization. As one of the few who yet remain, and must soon go over to the majority, I might fitly dwell on life's brevity, and the duty of diligence while its little day lasts. I might recall many reminiscences of departed ones, read a chapter of lamentations on their loss, and, like many a long-visaged divine, ply you with exhortations on the uncertainty of sublunary things, and the vanity of man as mortal. But these topics are not in my line. Neither my philosophy nor my religion teach me that there is any virtue in solemnity. I can see some sense in being cheerful and joyous. Gladness lubricates the wheels of life, but solemnity is a drag and a break. The most solemn animal is the ass; the most solemn bird is the owl. "Stupid as an ass," and, ironically, "wise as an owl" have passed into proverbs. It is no cause for gloom that one is getting old, if only the heart be young, and mine grows younger every day! My present object is a practical one. I wish to look over the history of this organization, glance at what it has accomplished, and picture some of the possibilities of the future.

The idea of a National Bee-Keepers' Convention originated in Michigan, the State which has given us a Cook, a Heddon, a Hutchinson, a Bingham, a Cutting, a Taylor, and a "Cyula Linswik," with other noted bee-keepers "too numerous to mention," also many apicultural ideas, "good, bad, and indifferent," including the best bee-hive, smoker and honey-knife extant, the pollen theory, and last but not least, the theory of hibernation.

When I read away up in Canada, the call for a National Convention at Indianapolis, Dec. 21, 1870, I said to myself, why can't this thing be international and continental? I resolved to go, and use my influence to have it so. Though I was the only representative present from Canada, my suggestion and request to have the association called North American, were courteously entertained, and we "Cannucks" were welcomed into full fellowship, where we have remained ever since, and propose to do so long as we are well treated, as we always have been thus far, and expect to be down to "the last syllable of recorded time."

This organization was formed simply and solely "to promote the interests of bee-culture." Has it fulfilled its mission? I contend that it has; not so fully perhaps as it might have done, if at the outset we had possessed the light of the present, but considering our *then* light, great and important results were accomplished. The first was the harmonization of conflicting interests, and the reconciliation of existing differences. Without being a resurrectionist of dead jangles and quarrels, I may fearlessly assert that from the first this organization proved itself a peacemaker. Men who had difficulties with each other were brought together, and persuaded to shake hands. Incipient cliques and rings were broken up. This association was the means of placing our venerated father, Rev. L. L. Langstroth, in his rightful position before the public. It prevented the laurels he had fairly won from being torn off his brow. It banished his enemies and the ememies of progressive apiculture into obscurity. Though it could not restore to him the fortune of which he had been robbed, and which no inventor ever earned more honestly, it could and it did "confess judgment" in his favor, and it has from time to time, by little presentations, testified its sense of an obligation it is unable fully to repay. A grand old book says: "The work of righteousness shall be peace." Adjustments on a basis of righteousness led to peace, and more than peace to brotherhood and good fellowship, so that when in two years after its organization, this association again met in Indianapolis, I was able, without flattery, to congratulate the meeting from the Presidential chair on the predominant prevalence of the feeling embodied in the pithy Scotch motto: "Were brithers a'!" I added: "May this feeling be paramount to every other all through our proceedings. May all our discussions be carried on under its influence. Then, though we may have our differences of opinion—and it would be a dull, uninteresting time if we had not—these will not interfere with our good fellowship, nor lessen our enjoyment."

My prayer on that occasion has been answered too much. I have been like the parson who prayed for rain in a dry time. It came, and not only rain but hail. An old lady who went to look at her garden after the storm, ejaculated, as she beheld her cabbages all riddled and torn, "Dear, dear, that's just the way with our minister, he always overdoes it." I think, as you know, that we have rather overdone the "brothering" business, and have carried it so far that it interferes with free, manly criticism.

Another good influence of the association has been to render apicultural humbugs and jimcracks well-nigh obsolete. I cannot take time to enumerate the number of these that there were sixteen years ago. Hardly any of them dared show face at our meetings, and if they did, it was like moth intruding into a hive of Italian bees—they were soon bustled out-doors.

Again, this association was the means of perpetuating the AMERICAN BEE JOURNAL. It met shortly after the lamented death of Samuel Wagner, father and founder of the JOURNAL. There was great danger of its coming to a stop. The widow and son, Mr. G. S. Wagner, were very anxious for its continuance, and offered favorable terms, but there was no money in it then, and no one was willing to take hold of it. Being at comparative leisure at the time, I was induced by the importunity of leading members of this association to embark in the enterprise. It was believed that by removing the JOURNAL from Washington to Chicago, it would be in a more favorable position for securing a constituency of paying subscribers. There was not only moral support pledged at the meeting spoken of, but eleven prominent bee-keepers joined in a bond of indemnity against loss to the extent of a $1,000. But for this moral and material backing, I should never have embarked in the undertaking, and it is quite certain the backing would not have been given but for the enthusiasm kindled at that convention. The enterprise proved a success. There was no loss. A boom came in bee-keeping. Just prior to that boom, the JOURNAL passed into the hands of its present proprietor, a man eminently fitted to work it up—compositor, editor, publisher, all in one. I hope I do not tell tales out of school when I say that every type of the JOURNAL was set by the editor's own hands, and it was run with the strictest economy. Our friend Newman has honestly earned the success he has won, and the JOURNAL has been in his hands, and is to-day, the right bower of North American apiculture.

I have said enough to show the association's right to exist because of the good it has done, but I have not exhausted this part of my subject. Briefly, let me add, the discussions at these meetings have cleared up many obscure points, diffused correct ideas in regard to bee-keeping, and furnished many novices with hints and instructions that have been of great value. Finally, it has given opportunity for forming the acquaintance of distinguished bee-keepers. When we see a name in print often, we speculate what manner of person it belongs to, and feel a curiosity for a personal interview. This curiosity has many times been gratified at these meetings, and never so signally as at Cincinnati in 1871, at Toronto in 1883, and at Detroit in 1885, when Father Langstroth was able to be present, and hundreds had the pleasure of seeing his benignant face, grasping his hand, and listening to the voice of "the old man eloquent."

On one, and I regret to say only on one occasion, the placid, open, genial and intelligent face of the late Moses Quinby appeared at the annual meeting of this association. It was in Cleveland, Dec. 6, 1871, and many of us felt it no small privilege to make the acquaintance and enjoy the society of a man so pre-eminently worthy of respect and esteem, and to whom modern apiculture is so largely indebted. These meetings have introduced to the personal knowledge of bee-keepers D. A. Jones, Prof. Cook, A. I. Root, James Heddon, and a host of others who have become famous in the realm of apiculture. Many very pleasant friendships have been formed, and now the social element, and the happy re-unions enjoyed, constitute some of the mightiest magnetic influences that operate in bringing members to this convention.

That this paper may not be chargeable with the garrulity of age, I shall allude but briefly, to the present and future of the association, for the present is before our eyes, and the future is for us to make. There is one respect in which the organization has not yet attained the original ideal of it which was present to the minds of the founders. In my address from the President's chair at the second Indianapolis meeting in December, 1872, I said: "Every member of this society should strive to get up a bee-keepers' club at home. These clubs should send representatives to State, Provincial or Territorial organizations, and this continental body should in due time, become representative, and be composed of a certain number of delegates from each State, Province, or Territory in North America, thus constituting a sort of high court of apiculture, to which the knottiest questions and hardest problems are submitted, and whence there shall emanate decisions and rulings of highest apiarian authority." At that meeting it was

Resolved, That the President of this society be authorized in its name and behalf, to address a circular to all the bee-keepers of North America, urging the formation of neighborhood, county, State, territorial and provincial associations, auxiliary to this society.

A circular was accordingly addressed "to the bee-keepers of North America," which will be found on page 170, Vol. VIII of the AMERICAN BEE JOURNAL. Some attempts have been made since to realize this ideal, but without any great success. Our meetings have always been largely local, and not sufficiently representative. The constituency is so extended that it is difficult to avoid this, except on the delegation plan. A State, province or territory could easily afford to send one or two representatives, when the expense individually would be oppressive. Let all who can come outside the official delegation, do so, but let the whole continent be represented in this great apicultural congress.

As to the future, I would urge that the association work along the old lines, with the added feature I have been recommending, There are some who consider the organization unworthy of preservation. A few think it an evil because it discloses the secrets of the craft, while here and there one falsely accuses it of being managed by a ring. I have no sympathy with any of these views. If the association has been promotive of the interests of bee-culture in the past, and I have shown, I think, conclusively that it has, there is no good reason why it may not be equally, and even more useful in the days to come, if managed with that broader wisdom which we may expect to come with the progressive intellectuality of the age. The fear of disclosing secrets, I regard as a mere nervous weakness. You may blurt out all you know, and still bee-keeping is an art which cannot be learned by the million. It requires a peculiar combination of characteristics which few men, and still fewer women, possess. The mere knowledge of all that is known by Heddon, Jones, Doolittle, Hutchinson, or "Cyula Linswik" is not sufficient to produce second editions of these accomplished bee-keepers; there is a "knack" which is the result of a peculiar compound of mental qualities only found in here and there *one.* The difference between knowledge possessed and knowledge applied, is that between a cyclopœdia and a Morse or an Edison. Cyclopœdias are plentiful, but Morses and Edisons are scarce.

As to the association being managed by a ring, there never was a more gratuitous libel against an organized body than this. It has no "spoils" to attract "victors." "Where the carcass is, there will the eagles be gathered together." In this case there is no carcass, and consequently no birds of prey ready to devour. On occasions when there has been temptation and opportunity for a clique to usurp authority, there has been arising above all selfish interests. Notably was this the case two years ago at Rochester, when by the non-attendance of Western bee-keepers the Eastern men had it all their own way. I am witness with what noble self-abnegation they arose to the duty of the hour, and made such managements as issued in the best bee-convention ever held on this continent, and perhaps in the world. I refer to the Detroit meeting last December, the memory of which will long be green, fresh and fragrant in the minds of all who were present at that remarkable gathering. No, there is no ring, never has been, to *my* knowledge, and few know the association better than I do. The first and only attempt at cliquing was effectually squelched, as I have narrated in my brief history. In the same impartial way I hope and believe the society will go on, increasing in usefulness as the years pass along, until we meet in a purer, happier and everlasting fellowship:—

"Where thrilling music through the welkin rings,
And nectar sweet is gathered without stings."

I cannot close without giving expression to the pleasure I feel in being once more assembled with you at Indianapolis. It is like going back to one's birth-place, for here our association was born. What I said from the President's chair in 1872, I here beg to repeat with all the added emphasis which the lapse of 14 years can give:

"It is very fitting that we should meet on the present occasion in this city, where the initiatory organization was formed, and the plan of consolidation conceived and proposed; where, too, we received at the outset such tokens of appreciation from the citizens, the press, and the civic authorities, especially in the free use of the fine Senate Chamber, in whose honorable seats even our lady bee-keepers could feel for the time that they were not only *suffragists* but *legislators*, and now in this Supreme Court room, where we can feel that we have attained judicial elevation. From its peculiar and central position the cordial spirit of its officers, editors, and people, and the number of such bodies that have seemed to come here as by some law of gravitation, Indianapolis deserves to be styled Convention City, and if it has not formally received that name, I propose that the bee-keepers here assembled do so christen it, forthwith."

The selection of the location for holding the next meeting was then declared to be in order, and Chicago, Ills., was, by vote, selected.

Adjourned until 2 p.m.

AFTERNOON SESSION.

The meeting was called to order at 2 p.m., President Cutting in the chair. The first business transacted was the election of officers, which resulted as follows:

President, Dr. C. C. Miller, Marengo, Ills.

Secretary, W. Z. Hutchinson, Rogersville, Mich.

Treasurer, Chas. F. Muth, Cincinnati, O.

Rev. W. F. Clarke, Dr. A. B. Mason, and Mr. R. L. Taylor were appointed a committee to report names for the Vice-Presidents.

HONEY-PLANTS.

Mr. A. I. Root gave a talk on honey-plants as follows: If possible those plants should be raised for honey that have value aside from honey-production. Alsike clover stands at the head of the list; buckwheat next. Following these are rape and raspberries. I do not, at present, know of any plant that I am certain that it will prove profitable to raise for honey alone. It is possible that there are four plants that it will be profitable to raise for honey alone, viz: sweet clover, figwort, spider-plant, and the Chapman honey-plant. The latter will continue to yield honey during a drouth better than any plant of which I know. It is biennial, resembles a thistle, blossoms just after basswood, and continues in bloom about three weeks. It is self-seeding, and requires no attention after it is once started. The seed should be sowed in early spring. When the committee which was appointed to visit Mr. Chapman and learn more about this plant, was at Mr. Chapman's place, he had two acres of the plant in bloom. He also had 130 colonies of bees, and they were gathering honey in such quantities from the plant that they were building comb and storing honey. The honey is light colored, not high flavored, being of almost a pure sweet taste.

T. F. Bingham—It is not an uncommon sight to see as many as from 6 to 10 bees upon each blossom, and this continues from daylight until dark, let the weather be wet or dry. The stalk is of a very fibrous nature, and it is possible that the fiber might be used in making straw paper.

H. Chapman—I ground 2½ pounds of seed and pressed from it 9 ounces of fine, clear oil.

The committee appointed to select suitable persons for vice-presidents, would report, recommending that only those States, Provinces and Territories have vice-presidents appointed, who are represented either by the presence of delegates or the transmission of reports.

The following were then appointed Vice-Presidents for the ensuing year:

VICE-PRESIDENTS.

Florida—W. S. Hart, New Smyrna.
Georgia—Dr. J. P. H. Brown, Augusta.
Illinois—Mrs. L. Harrison, Peoria.
Indiana—Jonas Scholl, Lyon's Station.
Iowa—Eugene Secor, Forest City.
Michigan—R. L. Taylor, Lapeer.
Missouri—Jno. Nebel, High Hill.
Nebraska—Wm. Stolley Grand Island.
New York—L. C. Root Mohawk.
Ohio—A. B. Mason, Wagon Works.
Oregon—Frank S. Harding, Portland.
Ontario—R. F. Holtermann, Brantford.
Pennsylvania—Arthur Todd, Germantown.
Quebec—H. F. Hunt, Villa Mastal.
Vermont—E. O. Tuttle, Bristol.

The committee on resolutions reported the following, which were adopted:

We the members of the North American Bee-Keepers' Society desiring to express our sense of the obligation we are under to our officers and others for the aid given in making this convention successful, offer the following resolutions:

Resolved, That our thanks are due, and are hereby extended to our retiring officers, for their untiring efforts to promote the interests of this society, and especially to the General Manager of the National Bee-Keepers' Union, Mr. Thos. G. Newman, for his success in securing reduced rates on the railroads.

Resolved, That we will carry with us to our homes an abiding remembrance of the generous hospitality with which we have been received and entertained in this city of Indianapolis.

Resolved, That we hereby tender our hearty sympathy to our honored father in apiculture, the Rev. L. L. Langstroth, in his present illness, and pray that he may be speedily restored to health.

Resolved, That we also heartily sympathize with our brother, Mr. Vandervort, on account of the serious illness in his family, which has detained him from his usual place among us.

N. W. McLain, of Aurora, Illinois, then read an essay on "Bee-Keeping and Apiculture."

Mr. R. L. Taylor, of Lapeer, Mich., gave the following on

THE COMING BEE.

What encouragement have we to work for the advent of "the coming bee?" Shall we breed bees for color, or for honey-producing qualities? For fancy points, or for pecuniary profit? These are questions that must be fully settled in our minds before we can intelligently discuss the subject of the improvement of the honey-bee. We hear much of our breeders of white-haired bees, and gentle bees, and golden-banded bees, and patent Albino bees, but we hear little of breeders of bees for profit only, *i. e.*, for profit in the production of honey, for, no doubt, breeders of these fancy bees find them very profitable. They sell all the queens they can produce at from three to ten times as much as can be obtained for queens without these fancy qualities—queens which are every whit as good, yes, generally much better as honey-producers.

We are fast degenerating into the condition of the poultry fraternity. With them, feathers fix the price of the chicken; but we err with far less temptation, for bees can never be made popular pets with which to please the eye and tickle the fancy of our uninitiated visitors. I would that all breeders of fancy bees would heartly seek with us for the bee that can produce the most; we cannot go with them, for, to use the slang of the period, we must have a bee for "business." But we who can so far liberate ourselves from the flavor of classic things as to think "American" as pretty a name as "Ligurian," and can see the most beauty in what does the most, what hope have we for the improvement of the bee?

All honey-producers, I suppose, harbor more or less hope that the honey-bee will be found capable of marked improvement; but our hopes undoubtedly are of all degrees of vigor and stability, according to each individual's clearness of knowledge and comprehension of the facts touching the subject, as well as to his manner of looking at these facts. Whatever improvement is possible can, without question, be most quickly reached or approximated by unity of effort, for everywhere there is strength in union. It is desirable, then, that this subject be discussed until we may, if possible, come to stand on some common ground.

As my time will permit me to set forth only an outline of my thoughts on this subject, let us take at the outset a brief view of what nature had done for the bee before it came to the hand of man. We must not forget that in a state of nature the rule of the survival of the fittest is a very different thing from what it is when guided by the hand of man. In a wild state the chief quality required by the bees to fit it to survive—to persist in living—is the ability to provide under the severest stress of circumstances sufficient food to supply its wants during the ensuing period of repose; in the ox it is not good beef, nor rich milk, but horns, strength, courage and agility to enable him to overcome or to escape his enemies and to master his mates that are not so highly gifted with these qualities.

During the roll of unnumbered centuries nature has been training the bee in the gathering of honey, and the greater the stress of circumstances under which the bee has existed, the more thorough has been its education. With the ox most of the qualities that fit him to survive in a wild state, specially fit him in domestication to die early. To fit him for man's use, all these qualities must be changed, and to effect the change the rule of the survival of the fittest must in its application be entirely changed. Now the qualities that make fitness to survive are, the most and the best beef and milk. But note that nature's education of the bee has all been precisely in the line calculated to produce the character and qualities which man so much desires it to posess, so much does the constitution of things favor the bee-keeper. Of the ox, man gets from nature little but a germ; of the bee, the well-nigh ripened fruit.

But on the other hand, in the domesticated state the bee runs great risk of positive deterioration. The ox naturally improves under the hand of man, because selections for breeding will be made almost without thought, and his better food and protection will favorably affect the growth and development; but with the bee better pasturage and better protection too often prolong the existence of the poorest, and so their blood is perpetuated in subsequent stock. This would be true under what is known as the old method of bee-keeping, but with how much greater force does it apply to bee-keeping under our new methods, with our feeders, and packing, and cellars, and the ready means which the movable comb furnishes us of preserving the lives of queens which are ready to perish on account of a lack of attendants.

Queens have a market value, and everything having a market value must be saved without regard to its intrinsic worth! Many complaints have been made on account of the low price at which queens must be sold, but I sometimes think that it would be immeasurably better, since we cannot well fix their quality, if their value were so much lower than it is that there would be no temptation to preserve the lives of inferior ones.

So we have in our favor the mighty hand of Nature, which with one finger supplied the sparse pasturage of the wilderness and the mountain, and with another inexorably destroyed such colonies as did not from such pasturage lay up a sufficient supply for their wants. And on what a high vantage ground this places us! Then we have the wonderful rapidity with which we may get increase from superior stock, and we must not forget to thank our stern winters that destroy the bees of those who are careless of the comfort, and so of the qualities of their honey-producing stock.

But on the other hand, we have much to contend with. The rich pasturage of our cultivated lands generally enables bees of the poorest quality to get enough for their wants; and what an army we have of those who are careful of their bees, but careless of their quality! They preserve all their queens because it is a calamity to let a colony become queenless, and their colonies that are too poor to collect enough to supply their own wants they feed, for it is also bad to lose a colony. The prevalent curse too of breeding for fancy qualities is abroad, and, like foul brood, is frightfully contagious. But worse, perhaps, than all, we have not learned to control the drones—worse because with the drones under control all these other obstacles would almost vanish.

One hundred years ago the Collingses of Great Britain undertook the improvement of the ox. For their purpose they selected stock whereever found, of whatever name or color having qualities which they desired to perpetuate. Their stock was originally improved by importing Holstein and Holland cattle which they used in crossing. Subsequently they crossed with a polled Galloway, from which was obtained a breed of great repute, and as the final result they obtained the magnificent shorthorn. We might accomplish in ten years with bees what they did in one hundred with cattle!

What ten, fifty or one hundred of our most successful honey-producers will form a syndicate, and, under competent management, on an island or a prairie, secure from any interference, put any colony or colonies they may from time to time find in their own apiaries showing more than ordinary honey-producing qualities, without respect to race, or name, or color, and let them be there bred on scientific principles, with the most relentless culling and the most careful tests?

The mind of some one here is no doubt full of notes of exclamation and interrogation, and would exclaim: "What! would you cross and combine the races?" My reply is, yes! If we ever succeed in making a decided improvement in the honey-bee, that improved bee will not be a pure blood of any of the existing races. No existing race has a monopoly of the desirable qualities—certainly not the Italian.

Let me make a suggestion, in closing, with regard to the cross-breeding of bees. Some one, I have forgotten who, in one of our apicultural publications, to illustrate his ideas of the evils of cross-breeding, said, in substance, that he had a cow—a cross, if I remember, between a short-horn and a Jersey, that proved to be an excellent milker; but, he went on to say, a further cross would result in a progeny of little value. He was in a measure correct in his statements with regard to the crossing of two breeds, which had each been bred for a purpose so entirely and radically antagonistic to that of the other. Indeed, he might have gone farther, for his cow, the first cross might naturally have inherited the poverty stricken sinews of the one parent and the non-milking qualities of the other. But he was entirely in error in his application of these facts to the case of the honey-bee.

As we have seen, all our races of bees have been bred by nature for honey-production, and so nearly equal are they that each race has its friends. From whichever parent a cross-bred bee inherits, it must still be a honey-producer, and the same must be true of all subsequent crosses; and, to produce anything else, nature must "go back" on all her previously established laws.

After the reading of the above the convention adjourned until 8 p.m.

EVENING SESSION.

The meeting was called to order at 8 p.m., President Miller in the chair.

An essay by James McNeill, of Hudson, N.Y., was read, on "Feeding Bees for Winter."

Dr. A. B. Mason then read the following essay, entitled

WINTERING BEES.

There has been so much said and written on this subject that it would seem that among the numerous methods, each claiming to be the best, the least experienced might find some way to winter bees without the annually recurring loss.

Even among our most successful apiarists we frequently hear of heavy winter losses. This leads me to believe that it is not the want of the knowledge, but a failure to put that knowledge into practice. If it is true, as we have been told from childhood, "in a multitude of counsel there is safety," we should *all* be able to winter our bees without loss.

In order to be successful in wintering, we are advised by "knowing ones" to keep our bees warm, at a temperature anywhere from 40° to 90°, to keep them cool; to keep them in the wood-house, chamber, cellar, or barn; to bury them; to pack with chaff; to remove all pollen; to so fix them that they will hibernate, and to leave them out-doors without any attention whatever, each wintering at times with perfect success. But as "one bird does not make a summer," so success by any method for one winter does not establish it as a fact, that such method is the best.

Five years ago Prof. Cook, in his book, said: "If the problem of successful wintering has not been solved already, it surely will be, and that right speedily. So important an interest was never yet vanquished by misfortune, and there is no reason to think that history is now going to be reversed." Has this prediction been fulfilled? I fully believe it has, and did all use the same forethought, diligence and care exercised in their other business, all would meet with the same success in wintering bees that they do in those avocations.

I am not verdant enough to think that I can offer anything entirely new on this most important subject, and can only hope to rather bring anew before you what has already frequently been said, and with the hibernation goblin, and various other theories staring me fully in the face, I do not hesitate to say that without pollen, as well as with, I do winter my bees as safely and surely as my horses, cows, and other stock.

It is not to be presumed that *I* am to *settle* this question of how to successfully winter bees, but if all thought and practiced as many who succeed best do, I believe there would be much less need of discussing this question.

The first question that would naturally be asked is, what is the cause of our winter losses? All kinds of causes are mentioned, such as cold, confinement, too much and not enough moisture, ventilation and want of ventilation; brood-rearing, bad honey, starvation, pollen, not hibernating, etc., but nearly all the lost bees have diarrhea, and I believe it is pretty generally admitted that *this* is the great cause of winter loss.

The next question, then, would be, what is the cause of bee-diarrhea? The answer to this is not so unanimous. That bee-diarrhea is the result of an over-loaded condition of the intestines will be denied by but few. But, what causes this over-loading? Some say, "cold is the real cause," but it seems to me this cannot be, for fecal accumulations take place without the aid of low temperature, and one of our most prominent bee-keepers has said that "cold *alone* cannot produce fecal accumulations."

In a lecture before the British Bee-Keepers' Association, Mr. Frank Cheshire said: "In prolonged spells of intense severity, stores often become (especially if unnaturally placed) so cold that the bees cannot touch them, and then the saccharine matters in their fluids being exhausted, they *have to draw upon their own muscular tissues to work them into material which should be heat-producing; that is to say, the bee has now to oxidize herself, and for the present is converted into a carnivorous creature, having to devour her own body*"...."A portion of the tissues remained which could not be got rid of thus. This must pass away through the bowels. A large quantity of phosphates and sulphates passes off into the bowels, and to these the urinary secretions are added. But while the bee is being loaded in this way, another unhappy circumstance is going on—the integuments of the bee were being reduced in weight, it becomes lighter and weaker; yet the bowels were getting so loaded that when the bee tries to fly it has a greater amount to carry than if it had been properly fed." So we see that starvation may sometimes be the cause of diarrhea.

If cold were the cause, keeping them warm ought to remedy the evil, but unfortunately it does not always. If confinement is the cause, then why do not all that are confined die? Confinement is a necessity in producing diarrhea, but cold is not. There can be confinement without diarrhea, but can there be diarrhea without confinement?

Ventilation, unless it be at the entrance of the hive, and brood-rearing, it seems to me, need hardly be taken into account in wintering. Poor honey in the hive may, but does not always produce diarrhea. The same is true of pollen, but diarrhea is so seldom produced *without* pollen that the exceptions need hardly be taken into consideration. That the eating of bee-bread, and the floating pollen in the honey during confinement, when not used in brood-rearing, will not produce diarrhea, it seems to *me*, cannot be truthfully asserted.

That the wintering problem has been solved, I think no longer admits of doubt. Many things might be named as aids in successful wintering, but I believe all may be included in two—proper food and right temperature. That bees may be wintered on a very poor quality of honey has been fully demonstrated, but success is not always assured when wintering on any other than stores of good quality.

Proper food is of *first* importance, and may consist of either honey or sugar syrup, or both, and may or may not, include bee-bread. If it is desired to have brood-rearing going on before the bees can gather pollen in the spring, it must be included in the winter stores. Many successful bee-keepers say they do not want their bees to rear brood till they can gather pollen from natural flowers in the spring, but my own experience satisfies me that I can get a much larger yield of honey from a colony that commences to breed in January or February than I can from one that does not.

Second only to proper food is the *right temperature.* This question then would naturally arise, what is the right temperature? I have had the best results with a temperature of about 45°, during the first part of the winter, and until brood-rearing begins, which is usually in January, although frequently it begins in December; it is seldom as late as February. From this time on I prefer a higher temperature, gradually increasing to about 55°. I have never been able to reach the high temperature from 60° to 90° that some claim to employ, for at from 55° to 60° my bees always become uneasy. If the repository is damp, I prefer a higher temperature than if it is dry.

A special repository, or a house-cellar may be used to secure this desirable result—desirable on account of the assured safety of the colonies, a large saving in honey, and their strong condition at the commencement of the honey season.

My method of wintering is as follows: As soon as settled cold weather arrives, in this locality about Nov. 15, I place my bees in the cellar with the honey-quilt glued fast, and the entrance open full size. I will simply add that a fair knowledge of bees, faithful attention to the apiary, and a thorough and timely preparation for the honey-flow, swarming and wintering will make any man or woman a successful bee-keeper.

Some discussion followed on the subject of what were the qualities of the best honey-gatherers, but nothing of general importance was brought forward.

A question being asked concerning perforated honey-boards, Mr. R. L. Taylor gave a description of those used by him, and thought they were of much advantage.

The remainder of the evening was spent in listening to music, songs, and recitations, feasting upon ice-cream and cake, and in delightful social intercourse.

Mr. P. J. Kelleher, who had been requested by the Indiana State Society to be present, recited Riley's poem, entitled "Fessler's Bees," which was very amusing, and caused much laughter.

Mr. C. F. Hansen, a blind musician, gave several instrumental pieces on the piano, as well as two or three songs which were received with applause.

After recitations by Dr. C. C. Miller and Thomas G. Newman, a vote of thanks was passed to the ladies and gentlemen who had provided the entertainment, and the convention adjourned to meet on Thursday at 9 a.m.

Mr. Newman then gave notice that the members and friends of the National Bee-Keepers' Union would meet in the hall at 8:30 a.m., and requested a prompt attendance.

THIRD DAY.—THURSDAY.

NATIONAL BEE-KEEPERS' UNION.

At 8:30 a.m. Dr. C. C. Miller, one of the vice-presidents of the National Bee-Keepers' Union, called the members and friends of the Union to order, and the manager, Mr. Thos. G. Newman, was requested to read the Constitution, and it was discussed article by article, but, after considerable debate, it was not thought desirable to advise any changes, and the meeting adjourned.

The North American Bee-Keepers' Society was then called to order by President Miller, and the next subject on the programme was the "Bee-Keepers Union."

Mr. Newman gave a short history of the work of the Union, and of what it had accomplished. At the close of his address the following was passed:

Resolved, That in the judgment of this society the National Bee-Keepers' Union is entitled to and should receive the support of all bee-keepers.

The following were elected honorary members of the society:

E. Bertrand, Nyon, Switzerland.
Frank R. Cheshire, London, England.
Rev. Wm. F Clarke, Guelph, Ont.
Prof. C. V. Riley, Washington, D. C.
Hon. —— Ross, Ontario, Canada.
Hon. Edwin Willits, Lansing, Mich.

By request, Dr. Mason took the chair, and President Miller moved that a committee of three be appointed by the chair to inquire into the desirability and feasibility of securing such legislation as will give a bee-keeper an exclusive right to keep bees in a certain territory; the committee to report at the next annual meeting. It was carried; and the following persons were appointed: C. C. Miller, I. N. Cotton, and Frank L. Dougherty.

The Secretary reported that he had received from Thomas G. Newman & Son 200 copies of the proceedings of last year, and had mailed to members of the society, 104; sold 7; donated to public libraries 5; leaving on hand 84.

A vote of thanks was passed for the presentation of 50 extra copies of the History of the North American Bee-Keepers' Society, by Messrs. Thos. G. Newman & Son, mentioned in the President's address, as having been received and sent to the public institutions and libraries of the United States and Canada.

The chairman of the finance committee reported that they had examined the books, also the bills, and had found all correct, with all the expenses paid, and a balance on hand of $1.06.

As it had been voted to publish the proceedings of this meeting in pamphlet form, same as last year, a collection was taken up to supplement the small balance in the treasury, and raise the sum of $30 wherewith to purchase 200 copies, in order to furnish each member with a copy of the Report. The amount collected was $17.35, making $18.40 in all, and Mr. Newman generously contributed the balance necessary to make up the $30, so that the promises made to members might be fulfilled, by each one having a copy of the Report in pamphlet form, by mail.

Mr. N. W. McLain, chairman of the committee that was appointed by the society last year to investigate the merits of the so-called Chapman honey-plant (*Echinops spherocephalous*) read his report, but the subject being so well covered by the remarks made by Mr. A. I. Root in his remarks under the heading of "Honey-Plants," to produce it here would be somewhat of a repetition.

A letter was read from Mr. A. E. Manum, one of the members of the committee, stating that if he were present at the meeting, he would move a vote of thanks to Mr. Chapman for the services he had rendered to bee-keeping, in the propagation and diffusion of this plant.

The report of the committee was received and placed on file, and a vote of thanks passed to Mr. H. Chapman, as suggested in Mr. Manum's letter.

An essay by J. E. Pond, Jr., was read, entitled "Reversible Hives and Frames."

After the reading of Mr. Pond's essay, the meeting adjourned until 2 p.m.

AFTERNOON SESSION.

The meeting was called to order by Dr. A. B. Mason, who took the chair by request, President Miller having gone home.

The next essay read was that of W. Z. Hutchinson, on

DRONES AND DRONE COMB.

That drones perform any important function aside from fecundating queens, I very much doubt. That they assist in keeping up the heat of the hive is not disputed, but this can be done equally as well by workers, and when of sufficient age *they* gather honey. It costs honey and the time of nurse bees to rear drones, and they consume, but do not gather honey all of their lives. That the bees rear drones only when they will be needed, or the bees expect they will be needed for the fertilization of queens, and that they destroy them or drive them from the hives when there is no farther prospect of their being needed for mating with queens, is an indication that they serve no other purpose.

Just before swarming time I one year gave each of 25 colonies an empty frame. Every frame was filled full of drone comb, and every comb filled with drone brood. When these colonies swarmed, many of the swarms were hived upon empty frames, and these same bees that one week previous were so anxious for drones, now bent their energies to the production of worker comb. Before swarming, the bees knew that drones would be needed for the fertilization of the young queens; the newly hived swarm possessed a laying queen, and no desire to swarm, hence no dones were needed, and no drone comb was built. By the time that the drone brood had hatched in the old colonies, each possessed a young fertile queen, and there was no immediate use for drones, hence, although the drone comb occupied the centre of the brood-nest, not a drone was reared in it.

It may be asked, why do bees rear so many drones if their only use is the fertilization of queens? Nature is always very prodigal in all matters bearing upon the certainty of reproduction, and we can often step in and interfere to an advantage. A few dozen drones to each hive is sufficient in an apiary. And right here let me say that we have very properly paid a great deal of attention to the rearing of our queens; have reared them from the best of mothers, and in the best manner possible, while the drones have been reared hap-hazard. The breeders of stock well know that prepotency is on the male side, and work accordingly.

It seems that the artificial fecundation of queens is possible, but not practicable for the owner of a large apiary who produces honey for a living. We sometimes may learn to control the mating of queens as easily as the mating of other stock is controlled; and we may not, but we can do this: We can allow no drone comb except the few cells that the bees will crowd in at the corners of combs, in all ordinary colonies, while in some of our best colonies we can rear an abundance of drones. *We should rear our drones with as much care as we rear our queens.*

As perhaps many are aware, I have, for the past four years, been allowing newly hived swarms to build their own combs in the brood-chamber; and that I have found it a profitable practice. Since I have written so much upon the subject, others have tried it. Some have succeeded as well as myself, while others complain that the bees build too much drone comb. In almost every instance when the bees built done comb they did not rear drones in it, but filled it with honey, which shows that they did not build it because they desired drones, but rather because honey was coming in rapidly, and sufficient inducements were not offered them to store it elsewhere, so they built store or drone comb to store the honey in, because more room could thus be secured more quickly and with less labor. The only instances in my experience in which *brood* has been reared in drone comb newly built in newly hived swarms, was when the queens were old and about to be superseded. This has occurred in my apiary only twice. When using Langstroth frames I hive a swarm upon five or six frames; and have in one instance had two frames filled with drone comb and the comb filled with brood. The queen was old. In no other instance have I had more than *one* drone comb built, and this has not occurred more than three or four times. I have more than 50 colonies in the new Heddon hive, and so far I have found only two drone combs.

To be brief, the building of drone comb has, with me, proved to be no objection to the hiving of swarms upon empty frames. I have, through the bee-papers, several times given my method of management; but I will briefly recapitulate: Do not have the brood-chamber larger than five Langstroth frames. Have the frames supplied with starters of foundation ½ of an inch wide. Place the frames not farther apart than 1⅜ inches from centre to centre. Use a queen-excluding honey-board. Have young queens. Remove the supers from the old to the new hive at the time of hiving, adding an extra case of sections, next to the hive, if necessary to give the bees plenty of room.

It is, of course, possible that there are some other points, in this matter, that I have not presented, but I have, for four years, made a success of this system, and as nearly as I can discover, I have given the reasons for my success.

T. F. Bingham—Why not use full sheets of foundation?

W. Z. Hutchinson—Because they would soon be drawn into full combs, when honey that would otherwise be stored in the sections, would be placed in the brood-chamber.

T. F. Bingham — I have several times tried hiving swarms upon shallow frames, both with and without foundation, and have secured better results by using foundation. Bees will occupy an empty brood-chamber sooner than they will a super filled with foundation.

W. Z. Hutchinson—I do not put on supers filled with only foundation when hiving swarms, but move the supers from the old hive to the new, and the sections in these supers have combs in all stages of development, and the bees are soon back at work upon the very sections that they so hastily deserted.

O. O. Poppleton—At our Iowa State Convention, held a short time ago, this subject was discussed in a lively manner, and five-sixths of those who spoke reported trouble from excessive building of drone comb. Perhaps the success of Mr. Hutchinson may be attributable to his locality; for example, the flow may be slow.

W. Z. Hutchinson—I know that I succeed, and I have given all the reasons I can think of why I succeed, but I am well aware that there may be other reasons, and the one mentioned by Mr. Poppleton is a fair one for consideration.

The committee on exhibits, would report the following articles on exhibition:

J. Van Deusen & Son, Sprout Brook, N. Y., comb foundation, Thin and Heavy, the latter wired and unwired.

James Forncrook & Co., Watertown, Wis., white basswood one-piece sections.

G. W. Broadbeck, Indianapolis, Ind., wooden feeder.

Bingham & Hetherington, Abronia, Mich., honey-knife and smokers. Brood-nest of stingless bees.

N. N. Betsinger, Marcellus, N. Y., woven-wire separators, and section-case.

N. D. Coffin, Westland, Ind., slat honey-board.

Cera Manufacturing Company, Baltimore, Md., foundation on wood, paper and linen.

H. D. Cutting, Clinton, Mich., tin bee-feeder, and section-box former.

Dr. G. L. Tinker, New Philadelphia, O., sections and queen-cage.

W. Mason, Fillmore, Ind., extracted honey.

E. S. Armstrong, Jerseyville, Ills., reversible hive.

G. W. Demaree, Christiansburg, Ky., supers for comb and extracted honey.

H. D. Davis, Bradford, Vt., surplus sections and shipping case.

The Hub Manufacturing Company, New Hampton, Iowa, Wells' patent window screen for honey-house windows.

A. Cox, Whitelick, Ind., "PURE HONEY," in letters as worked by the bees, also several glass globes nicely filled.

Ora Knowlton, New Brunswick, Ind., very fine display of honey-plants mounted on card-board.

G. B. Lewis & Co., Watertown, Wis., sections for honey.

T. S. Bull, Valparaiso, Ind., extracted honey.

E. O. Tuttle, Bristol, Vt., photograph-medley of the principal bee-keepers in America.

H. Chapman, Versailles, N. Y., Chapman honey-plant.

Dougherty & Wiley, Indianapolis, Ind., books, smokers, sections, and general stock of bee-supplies.

Chas. Dadant & Son, Hamilton, Ills., comb foundation.

The essays offered at this meeting were both numerous and lengthy, and when the hour of adjournment arrived there were several unread essays yet on hand, and the pent-up feeling upon the subject resolved itself into the following:

Resolved, That the executive committee be instructed to select essayists and assign topics for the next convention; to have fewer and shorter essays, and to exclude, except in *rare* cases, all essays written and forwarded by absentees.

The convention then adjourned *sine die*. F. L. DOUGHERTY, *Sec.*

Convention Notices.

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Nov. 24 and 25, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

☞ The next meeting of the Bee-Keepers' Association of Hamilton and Tipton counties, Ind., will be held at Westfield, Ind., on Saturday, Nov. 6, 1886. The following interesting programme has been arranged: Opening exercises; Music; Address of welcome, H. Mills; Best method of wintering bees, D. Leaming; Discussion opened by Marion Moore; Best method of realizing the largest amount of profit on a colony of bees M. Doherty; Discussion opened by Isaac Booth, Best method and time to prepare the bees for spring work, Zimri Kivett: Discussion opened by Dixon Bray; Question box. All interested in bee-keeping are invited to come, bringing their baskets well filled, so as to stay all day, and make this one of the most interesting and profitable sessions that the Association ever held.

☞ The Patsaliga Bee-Keepers' Association of Ala., request bee-keepers throughout the State, to meet delegates from this Association in Montgomery, Ala., on Nov. 9, 1886, for the purpose of forming a State association. The State Agricultural Fair will meet there on Nov. 8, and hold one week. Liberal premiums are offered to bee-men. Let me hear from every bee-keeper at once.
J. R. McLENDON, *Pres.*, Stoddard, Ala.

* * *

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers for 1887.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¼c. per light, extra.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Receipts are liberal and prices vary from 10@13c. per lb. for white in sections varying from 1 to 1¼ and 1½ lbs. Many sales of good white 1-lb. sections are made at 11c. Extracted is quiet and ranging from 5@7c.

BEESWAX.—23@25c. R. A. BURNETT,
Oct. 18. 161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

McCAUL & HILDRETH BROS.,
84 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Best white in 1-lb. sections, 12@13c.; dark, 10@11c., with a good supply in commission houses.

BEESWAX.—23c.
Oct. 10. M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is fair for choice comb in 1 and 2 lb. sections, which brings 12@15c. a pound in a jobbing way, according to quality and neatness of package. There is a fair retail and jobbing demand for extracted in square glass jars, while the order trade for dark grades from manufacturers is improving. Range of prices for extracted is 3½@7c. per lb.

BEESWAX.—It is in good demand, and good yellow brings readily 20c.

Oct. 9. C. F. MUTH & SON. Freeman & Central Av

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.

Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted; 3¼@3¾c. for amber extracted; and 8@11c. for comb honey in 2-lb. sections; 12@18c. for 1-lb. sections.

BEESWAX.—It finds buyers at 20@23c.

Sep. 28. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Receipts are light and the market is very quiet. We quote: White extracted, 4@4¼c.; amber, 3¾c. Comb, 8½@10c. for white.

BEESWAX.—19@22c.

O. B. SMITH & CO., 428 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¼c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Dull at 21c. for choice.

Sep. 30. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand for all grades is good, and sales are large. Receipts are good and prices are steady with a firm feeling. We quote: 1-lb. sections of white clover, 13@14c.; dark, 10@12c.; 2-lbs. white clover, 11@12c.; dark, 9@10c.; Calif. 2-lbs., 9@11c.; ½-lbs. white clover, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5½c.; Calif. amber, 5c.

BEESWAX.—20@22c.

Oct. 15. CLEMONS, CLOON & CO., cor. 4th & Walnut.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15.00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2 00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.15.

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

Advertisements.

WANTED, an active, reliable man in every city and town in the State of Illinois to work up Councils of the American Legion of Honor, an insurance organization now having 60,000 members, and we are willing to *pay liberally in cash* for services rendered in this work. It can be performed at odd and leisure hours without interference with regular business, and is an occupation affording much pleasure to those engaged in it. For full explanation how to go to work and what to do, address

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILLS.

THE CHAPMAN HONEY-PLANT.

IN accordance with a previous notice in bee-periodicals, I am now prepared to fill orders for the seed of the above plant at the following prices: ⅛ ounce, $1; 1 oz., $2; 2 oz., $3; 4 oz., $5; and ¼ lb., $8. One ounce contains from 1,600 to 1,800 seeds. On account of extreme drouth my stock of seed is limited an persons ordering will be served in rotation. The seed should be sown in early spring and general directions for cultivation will be given on each package.

This plant is not an obnoxious weed, but is as easily eradicated as clover. Having carefully watched its habits of growth and its honey-producing qualities for the past six years I believe those who commence its cultivation in a liberal way will be better pleased than by commencing with a small quantity of seed. It has been tested by prominent bee-keepers all the way from Vermont to Nebraska and Ontario. We refer to the report of the committee appointed by the North American Bee-Keepers' Society held at Detroit in 1885. The committee reported at the Indianapolis, Ind., convention held Oct. 12–14, and their report will be found in all bee-papers publishing the report of that convention.

Write all orders plainly and give your post-office address in full.

H. CHAPMAN,
42Atf VERSAILLES, Cattaraugus Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Honey For Sale.

We have a large quantity of the best white EXTRACTED HONEY, in 200-lb. Kegs, for sale, which we will deliver on board the cars at **8 cents** per pound. Orders solicited.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

Atf **J. VANDERVORT, Laceyville, Pa.**

THE
AMERICAN APICULTURIST

WILL be sent one year and a copy of the 3rd Edition of the Bee-Keepers' Handy-Book, on receipt of $1.50. The book contains 300 pages and 100 fine illustrations.

HENRY ALLEY,
41Atf WENHAM, MASS.

Vandervort Foundation Mill.

6 Inch, Price, $20.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

ATTENTION

Dealers and Manufacturers.

WE ARE prepared to furnish you with SECTIONS for the COMING SEASON at **bed-rock prices**. Write us.

G. B. LEWIS & CO.,
37Atf WATERTOWN, WIS.

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Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear
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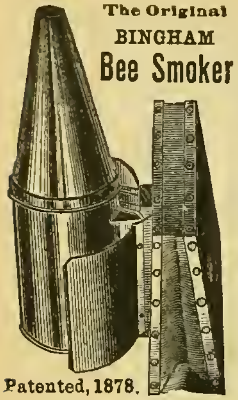

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

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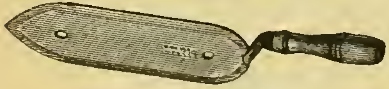

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Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
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TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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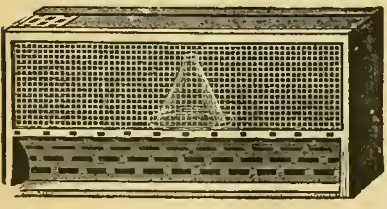
Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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923 & 925 West Madison St., CHICAGO, ILL.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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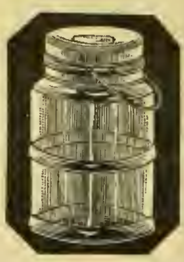
GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen	$1.60
" 2 pounds " "	2.00
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FIRST IN THE FIELD!
THE INVERTIBLE HIVE!
INVERTIBLE FRAMES,
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☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

J. M. SHUCK, Des Moines, Iowa.
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Muth's Honey Extractor,

Perfection Cold-Blast Smoker,
SQUARE GLASS HONEY-JARS, etc.

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Freeman & Central Ave., - CINCINNATI, O.
P.S.—Send 10c. for Practical Hints to Bee-Keepers

RIBBON BADGES.

We have some ELEGANT RIBBON BADGES, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

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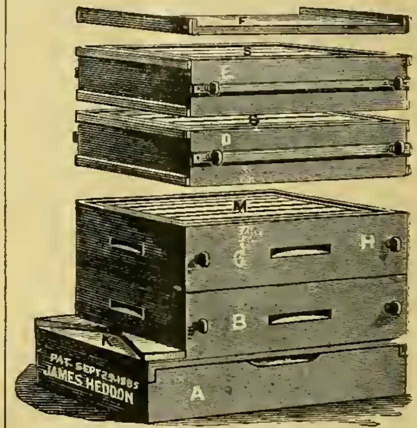
The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

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FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Nov. 3, 1886. No. 44.

Another Union Convention is to be held in Albany, N. Y., next January. See the notice on page 699. Let there be a general rally of the bee-keepers of New York at this union meeting.

* * *

W. Z. Hutchinson has sustained a loss by fire. We are sorry to learn that on Oct. 25, the store, hotel, post-office, and railroad depot at Rogersville, Mich., were consumed by fire. In the depot Mr. H. had stored 1,000 pounds of his choicest comb honey, preparatory to shipment. It was all consumed; and it is quite a loss for our friend, who is so well known to our readers, as a correspondent.

* * *

Mr. Edward R. Newcomb, of Pleasant Valley, N. Y., had an "exhibit" and "apiary tent" at the Fair, of which the Poughkeepsie *News-Press* remarks as follows:

> The apiary tent of E. R. Newcomb, of Pleasant Valley, was filled with visitors all through the day. Mr. Newcomb entertained his callers by explaining to them the habits of bees, and method of preparing the comb and honey. His exhibits of bees, comb honey and extracted honey are very fine.

Mr. Newcomb has sent a photograph of the tent containing the exhibits to this office, which is placed in our Museum.

* * *

These names were omitted by the secretary, through an oversight, in the list of members at Indianapolis, on page 669:

Rev. W. F. Clarke, Guelph, Ont.
C. E. Parks, Watertown, Wis.
O. O. Poppleton, Williamstown, Iowa.
Arthur Todd, Philadelphia, Pa.
Stewart Nichols, Sugar Creek, Ind.
Madison Talbert, Morristown, Ind.
John Clark, Liberty, Ind.
A. Leedy, Andrew, Ind.
Geo. J. Frey, Lebanon, Ind.
A. Cox, Whitelick, Ind.

* * *

Mucci & Bro., of Kentucky, received a queen from Italy, by mail, on Sept. 27, 1886, which was only 13 days in transit. She now has 3 frames full of brood, and they say that it was the first queen-bee to cross the Atlantic in the mails. Several have been sent across by mail, but which was *first* we are now unable to say. One of the first was taken from the mail at New York, custom house *fees* collected, and then forwarded by express to the consignee. This was of course an outrage, but we know of no inexpensive redress, as we explained to the consignee, who complained to us at the time.

Where Honey Comes From.—It has been known for ages that honey is a vegetable product—that it is not "*made by bees,*" as many ignorantly express it, but gathered from the flowers! Now comes a theorist who asserts the opposite in the *Rural Home* for Oct. 2, 1886, published in Rochester, N. Y., a marked copy of which was sent to us by Mr. W. E. Peterman, of Trappe, Pa. He says that "honey is not secreted by the flowers, but is held in solution in the atmosphere, and under favoring conditions is attracted to and condensed by flowers and leaves having affinity for it."

The author of this statement is W. M. Evans; but there is some hope for him, as he subsequently makes this statement concerning honey-dew: "Before I came to Virginia I did not believe in honey-dew; now belief is knowledge." He may, therefore, learn something else. He then adds:

> Last year, after the clover and all our honey flowers had dried up, and before fall flowers blossomed, my bees gathered 2,000 pounds from honey-dew on pines. You could see it plainly in the morning in small, white drops. In color and flavor it is equal to white clover, and in body is heavier.

We are aware that there are different kinds of honey-dew, and some may be of very passable quality, but most of it is totally unfit for use. That Mr. Evans did not believe in its existence until recently, proves that his knowledge is very limited, and he should be very careful in making assertions in public print, so utterly unfounded as the first extract we have quoted.

If honey is not secreted by the flowers, how does Mr. Evans account for the fact that in "new country," before so much land is brought under cultivation, where wild flowers abound, so much more honey can be obtained than after the same lands have been cultivated? If "the honey were held in solution in the atmosphere," cultivation which destroys the wild flowers should not make so much difference!

Again, how comes it that the honey from basswood, white clover, buckwheat, etc., so much differ in *color* and *taste* if it is held in solution in the atmosphere, and is simply "attracted to and condensed by the flowers and leaves?" If his theory were true would it not all be of the same color and taste?

Mr. Evans than rattles off the "Wiley lie" about filling combs and glucose, and selling that which he calls "Devil's honey" for the pure article, in lots of 10,000 pounds, and denominated "apple blossom honey" in the New York market. It is all *bosh!* He is only adding to Wiley's nefarious lie, by "drawing on imagination for facts," and then swearing they are *true* statements of the case!! He then gets excited and writes these frenzied words in conclusion:

> The bells of adultery, adulteration, bribery, corruption, and all kinds of human cussedness have broken loose and taken hold of all classes!

We think that it is the worst kind of "cussedness" to lie about a pursuit and endeavor to ruin it by such stupidity and unreasonable assertions as Mr. Evans indulges in!

* * *

Mr. O. O. Poppleton's honey crop for this year amounts to 15,500 pounds, and is mostly extracted honey—as yet all of it is unsold. In May he had 141 colonies, which have increased to 233 now.

That Lawsuit against Mr. C. C. Richardson, of Tipton, Ind., for damage alleged to be done by his bees to a neighbor, will come up in the November term of court, on appeal from a Justice's Court.

At the Indianapolis Convention another neighbor of his made some assertions about the Union not having given Mr. R. any assurance of help in defending the suit. Not remembering the details of so much correspondence as of necessity he has in such matters, the Manager promised the Convention that he would examine the records in his office, on his return, and make a public statement of the case. Upon looking the matter up, he found that he had written to Mr. Richardson on Aug. 4, 1886, requesting him to make the defense as thorough as possible, assuring him that the Union would help him to a reasonable amount. To this Mr. R. replied that he had permitted the case to go by default in the Justice's Court in order to take an appeal to a higher court. The Manager, on Aug. 23, requested him to ascertain from his attorney the probable cost of the suit including the appeal; and again assured him that the Union would render him all the aid in its power to defend the case.

After ascertaining these facts in the case, the Manager then wrote to Mr. R. stating what had been said by a member at the Indianapolis Convention, and asked: "Did he speak thus with any authority from you?" To this Mr. R. replies as follows, by return mail:

> I hasten to answer your inquiry, "Did he speak thus with any authority from you?" with a positive denial. He had no grounds for making the statement on any authority....My case will come up in the November term....The costs of the suit will amount to about $40. I stand by the Union, and whatever help can be rendered by it will be satisfactory. C. C. RICHARDSON.

Probably the person who made the remarks referred to at the Convention (his name is forgotten), intended no wrong, but either his memory was defective, or he failed to comprehend the facts in the case.

The Manager has copies of all his official letters, which are not a few, but are always accessible to any member of the Union who may desire to review them, in any application for defense or other official act. This is done not only for convenience but for proof, in cases like the one under consideration.

* * *

Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

This "History" will be sent FREE by express at the subscriber's expense; or will be mailed for 10 cents extra to any place in the United States or Canada.

It is arranged chronologically by years, from 1492 to 1885. Every event is narrated in the order of its date. These are not confined, as in other works, to political matters, but embrace every branch of human action.

This premium is worth the whole of the money sent for both periodicals, and should induce thousands to subscribe, and thus get two unrivalled weeklies for nothing.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Preparing Bees for Winter.

Query, No. 327.—My bees are all in the style of hives mentioned on page 361. I have been thinking of putting them away for the winter, with first a thickness of muslin, and then two or three thicknesses of quilts over the frames, with enough weights around outside to keep them in place without boards. Will it be the best way? I winter my bees in a cellar.—J., New York.

With me, bees winter well in that way if the cellar is all right.—G. M. DOOLITTLE.

I have tried the equivalent of this for years with almost absolute success. Of course the cellar must be right.—A. J. COOK.

In a cellar we put nothing over the frames except the enameled cloth slightly opened. Quilts cannot injure, however.—DADANT & SON.

If the cellar is all right, I think they might winter well.—C. C. MILLER.

I doubt if such is the *best* way, but if your cellar keeps at a temperature of about 50°, I think your plan will give good results.—JAMES HEDDON.

That depends upon the temperature. If it ranges from 45° to 50°, there should be free upward ventilation; but if the range is below 45°, I prefer a thin, unpainted board with bee-space allowing no free upward ventilation. In the latter case I should give free bottom ventilation.—G. L. TINKER.

Wintering Bees in a Straw-Stack.

Query, No. 328.—1. How would it do to winter bees in a straw-stack? 2. How large a stack would it take to keep the temperature above freezing? 3. Would there need be any provision for ventilation?—H. A. C., Illinois.

I consider it impracticable to winter bees in a straw-stack, and I would not advise any one to attempt it.—G. L. TINKER.

I cannot say how such an experiment would terminate in the dry cold air of the North, but dampness would accumulate in the hives under such conditions, in this climate, and ruin the combs, and of course the bees with them.—G. W. DEMAREE.

1 and 2. That depends much upon your latitude and the severity of the winter. 3. Bees must have air in some way.—C. C. MILLER.

1. Try it and report. 2. Frost would eventually reach the centre of the largest stack unless kept warm by the ground or bees. 3. I should say not.—G. M. DOOLITTLE.

1. If it does not freeze in the centre of the stack it might answer. 3. I do not think any special ventilation would be needed.—W. Z. HUTCHINSON.

The same objection occurs that arises with burying bees. You could not regulate temperature, nor know whether it was right or wrong. I should not dare to submit bees to such an unknown and unknowable condition.—A. J. COOK.

A friend, a few years ago, put a small stack of corn stalks around each hive, and thought he had just "done it;" and he had, for he lost every colony so treated. When taken out, they were a wet, moldy mass.—H. D. CUTTING.

I think that bees would winter well protected by a straw-stack, if care was taken to prevent excess of moisture within the hives. My impression is, as I have frequently stated, that cold of itself does not kill our bees; but that they are destroyed by excess of moisture which freezes and prevents the cluster from getting at its stores, or else causes the stores to ferment and thus become dangerous.—J. E. POND, JR.

I believe that bees would gain much protection from being in the centre of a large straw-stack. Turn a board over the front of the hives, and that will insure all the ventilation I should care for. Guard against mice and rats. Have the hives rest on a foot of straw. The stack should be well "stacked," so as to turn water.—JAMES HEDDON.

Boneset Honey for Winter Stores.

Query, No. 329.—Will bees winter well on honey that is gathered from boneset, when the same is nicely capped over? Or would it be better to extract the boneset honey out of the combs and feed the bees granulated sugar syrup, or white clover extracted honey to winter on?—G. H. D.

I should try the boneset honey if I had it.—G. M. DOOLITTLE.

Yes, winter them on boneset honey if capped.—DADANT & SON.

If well cured, boneset honey is as good as any for wintering.—J. P. H. BROWN.

I do not know but I should say at a guess that boneset honey would be all right.—C. C. MILLER.

I have had no experience with boneset honey, but from what I have read, I should prefer sugar syrup or good honey.—H. D. CUTTING.

I have no fear of such honey. Two years ago I used such honey exclusively in several colonies, and all wintered perfectly. Honey from autumn flowers I fully believe just as good as that from early bloom.—A. J. COOK.

I know no reason why boneset honey is not as good for winter stores as is any fall honey. I have wintered bees successfully upon boneset honey.—W. Z. HUTCHINSON.

I should consider well ripened boneset honey, well capped in the combs, superior to the syrup of granulated sugar for wintering bees.—G. L. TINKER.

I prefer properly prepared cane-sugar syrup to any honey, but I have had as good results from boneset, and honey from other fall flowers, as from clover or basswood honey. I should depend upon the boneset honey as soon as any.—JAMES HEDDON.

If the honey is well ripened, and the hive kept well ventilated and free from excessive moisture, there is no reason why the bees should not winter well on boneset honey. I prefer natural stores; others prefer sugar syrup in any case, no matter from what source the honey comes. Sugar syrup has proved safe for winter stores; so has honey of all kinds. The advocates of the various theories will each stick to his own so long as his bees winter well.—J. E. POND, JR.

I see no reason why they would not. Beyond question they would winter all right on such honey here. Do not feed sugar syrup to bees if you can help it, for it is almost impossible to feed syrup even for stimulating purposes without getting some of it into the honey.—G. W. DEMAREE.

Laying-Room for the Queen.

Query, No. 330.—I work all my bees in the Simplicity hive for extracted honey. Will the average queen lay as many eggs if she is confined to the lower story with perforated zinc, as she would if she had the run of the whole hive of 20 or 30 frames?—H. L.

No.—G. L. TINKER.

No.—H. D. CUTTING.

No, according to my experience.—G. M. DOOLITTLE.

Not if she is a very prolific queen.—DADANT & SON.

I think she will lay just as many.—J. P. H. BROWN.

If confined to the lower story, the bees might take a whim to crowd her, but I think generally not. At any rate I would risk it.—C. C. MILLER.

Just as much. It is much better to keep her from the frames used for extracting.—A. J. COOK.

I think not, but I can get the greatest dividend upon the capital and labor employed by using the excluding honey-board, and keeping the queen always in the brood-chamber.—JAMES HEDDON.

Perhaps not quite, but it will be much more convenient and profitable to have the brood in one part of the hive, and the honey in another; and I see no advantage in securing a large number of eggs from one queen. Queens are cheap compared with the cost of combs.—W. Z. HUTCHINSON.

Yes! In this matter I "speak as one having authority," for I have tested the point thoroughly. The lower story, however, must be kept extracted, so that the storage will not drive the queen out. Give her all the room she needs. Ten Simplicity-Langstroth frames will be found as many as the best of queens can keep filled, if the whole cell-space is given her to occupy.—J. E. POND, JR.

"Simplicity hive" is very indefinite, as a description of a hive, with the "Langstroth" left off. If the hive you use has a brood-chamber as large as that of the standard Langstroth, the average queen will find as much room as she ought to have when confined to the brood-chamber with a queen-excluder. In my opinion it does not pay to let a queen scatter her brood; it is better to give her plenty of room in the "queen's chamber."—G. W. DEMAREE.

Peculiar Actions of Worker-Bees.

Query, No. 331.—Doubtless you have noticed worker bees collected on the alighting-board or front of the hive, moving their bodies backward and forward as though they were busily polishing their mandibles on the wood. Can you give any clue to the cause of their thus acting, or the purpose to be served by these movements.—Ky.

No.—C. C. MILLER.

No.—H. D. CUTTING.

I cannot.—W. Z. HUTCHINSON.

I should like a correct reply to that question myself.—G. M. DOOLITTLE.

It looks as though they were cleaning the floor.—DADANT & SON.

At such times they are "knights" of idleness—no honey to gather. Instead of "polishing" their "mandidles" they are using them to "plane" their alighting-boards and to "gnaw" their entrance larger.—J. P. H. BROWN.

This appears to be a marked trait of black bees. Syrio-Albino bees are rarely seen to do it, and then but very few. They are certainly idlers, for the movements described subserve no useful purpose.—G. L. TINKER.

I have had these peculiar movements on the part of worker-bees under observation for several years past. I sometimes notice hundreds of them stationed on the alighting-board or front of the hive, with their wings slightly elevated, and their bodies systematically moving backward and forward. I have progressed no further than this, viz: These movements are only seen at such times as there has been a cessation of brood, as after a swarm has issued, or a queen has been introduced, and then generally about the time the worker progeny begins to hatch. I would like to know more about it.—G. W. DEMAREE.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ~O northwest: O~ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Some Observations in Bee-Keeping.

G. M. DOOLITTLE.

Some items of interest to me have come to my notice the past season, and thinking that perhaps the same might not be uninteresting to the readers of the BEE JOURNAL, I will here speak of them. The first was this: During the last of May and the first of June we had a bad spell of weather for bees, inasmuch as it was cool, cloudy, windy and rainy the larger part of the time. As the bees were short of stores, I had to resort to feeding.

Before commencing to feed I had been equalizing stores, hoping that there was honey enough in the yard to supply all through the honey dearth we were then having, if it was properly apportioned to each colony. In doing this work I noticed that nearly all the brood in the hives was in the shape of eggs and sealed brood. As the sealed brood hatched out, eggs were deposited in the cells, till there came a time that there was little else in any of the colonies beside eggs, in the brood line. These eggs the bees would not or did not hatch; or perhaps I might say the bees prevented their hatching, or else removed them from the cells just before they should hatch, and the queen deposited more eggs in the cells again. Of one thing I was certain, the combs were well supplied with eggs all this time, yet scarcely a larva was to be found. Feeding seemed to make little difference with them, and the reason I especially noticed it, and tried to coax the bees to get those eggs into larvæ, was that these eggs were to become the bees for my basswood harvest, and unless I had such bees I could have no promise of basswood honey. So I watched them day after day till it came warm, fine bee-weather again, when to my surprise the barren combs were teeming with little larvæ in less than three days.

I wish Prof. Cook, or some other scientist, would tell us how the bees kept those eggs day after day, not allowing them to hatch, and then when they wished larvæ, hatched nearly all the eggs in the hive in a day or two. Without my stopping to explain the why and wherefore, it will be seen that I believe that the eggs were preserved for a time, rather than that the bees kept destroying them as they were about to hatch, and the queen laying fresh eggs. I could explain why I think the same eggs were in the hive for two to three weeks, but it would be so long that it would cut out other matter which I wish to present.

After much careful observation I was led to believe that a little chyme was placed on every egg at the time that the bees wished it to hatch, and so long as this chyme was withheld the eggs were preserved. One thing was certain, I saw eggs with chyme on them, and at the base of the cells about them, which cells and eggs was marked, and after the lapse of from one to two hours the eggs were gone and larvæ had taken their place. This same thing I have also noticed with eggs in queen-cells.

To prove the matter farther, I placed a wire-cloth cage over ¼ of a comb of eggs 2½ days old, and in 4 days I looked to see if the eggs were there intact, but the bees had gnawed under the cage so as to get in *en masse*, hence I found nothing but little larvæ, and my experiment was in vain. Not having the time at my command to follow the matter up, I am still in the dark, and wish the help of the *sisters* and brethren in this matter. Oh! how I do wish, *at times*, that I was a scientist, but I am only a kind of a practical clodhopper. Well, it would not be best for all of us to be scientists, so I will be content with my lot.

Mr. A. I. Root suggests that it was for lack of pollen that the eggs were not hatched, but I think this is a mistake, for there was plenty of pollen in the hives, besides the bees had a day, or part of a day occasionally, when they brought in pollen freely.

UNITING COLONIES.

We have long heard that when uniting bees, the two colonies to be united should be moved gradually day by day, until they were both together, when they could be united without any of the bees being lost by going back to the old location. This seemed a big job to me, so this fall, as I had much of this kind of work to do, I just smoked the colony to be moved, at the entrance, pounding on top of the cover of the hive at the same time with my fist. In a moment more I put the colony on a wheelbarrow and rapidly went to the colony they were to be united with. This rapid wheeling made the bees think that their house was "coming down over their heads," and caused them to fill themselves as "full as ticks" with honey. The other colony was now treated as the first, save the wheeling, when both were immediately united by alternating frames.

Nothing was done to cause them to mark their location anew, nor was the old stand altered in any way, for the empty hive was placed back where it stood. At their next flight I saw quite a few bees about the old stands, so, to see how many would return, I placed a frame having honey and brood, in one hive, and a frame containing only honey, in another, while the rest were left empty. In the one in which I placed brood, I had at night about a quart of bees with queen-cells being started, showing that I would have lost that many, had I not experimented farther; but that farther experiment proved that some of my former views had been hastily drawn, for I happened near the hive in which the frame of honey was placed, about one hour after placing it there, when, to my chagrin, I saw bees going out of it loaded, and I believed that robber bees were carrying off the honey.

I was about to seize the frame of honey so as to prevent a general excitement in the bee-yard, when I saw a bee catch another which was flying about the entrance, and treat it as a robber. That caused me to think, so I went immediately to the hive to which this colony had been united with, when I saw that my robber bees, as I had supposed them, were going into this hive with their loads of honey. I left them, and at night I found an empty comb in the empty hive, with no bees, and a contented hum at the entrance of the united colony, as we hear when a colony has been getting honey. In none of the other empty hives did I find any bees, and I was satisfied that all went back, even if they did hover about the old hive for an hour or so. The moral is plain without my taking time to draw it.

SELF-UNITING COLONIES.

Another observation is this: In preparing for uniting I killed some of my poor queens, so as to keep the better queen in the united colony. These queens were killed during the middle of the day, preparatory to uniting near sunset. One day after I had killed several, it began to rain so that I could not work at the bees toward evening as I had proposed. Bad weather continued for three or four days, when the sun broke out warm soon after noon. About 2 o'clock I saw a commotion in the bee-yard, and going out there I found that one of these queenless colonies was swarming out slowly (as a swarm returns where it is hived without a queen), and going into another colony which had a queen, setting up the usual satisfied hum which all bees do when a home is found. They were received kindly, so I had one colony united without any trouble.

The above is an entirely new experience with me, of having a queenless colony swarm out and go in with another; and had I not seen it, when I went to unite, I should have doubtless reported a case of robbing. As additional light, I might say that there was no brood in this hive, not even eggs, and, although I carefully watched on their next flight, not a bee went back to hover around the old hive, so I found that the bees' plan of uniting was ahead of mine after all.

Borodino,⊙ N. Y.

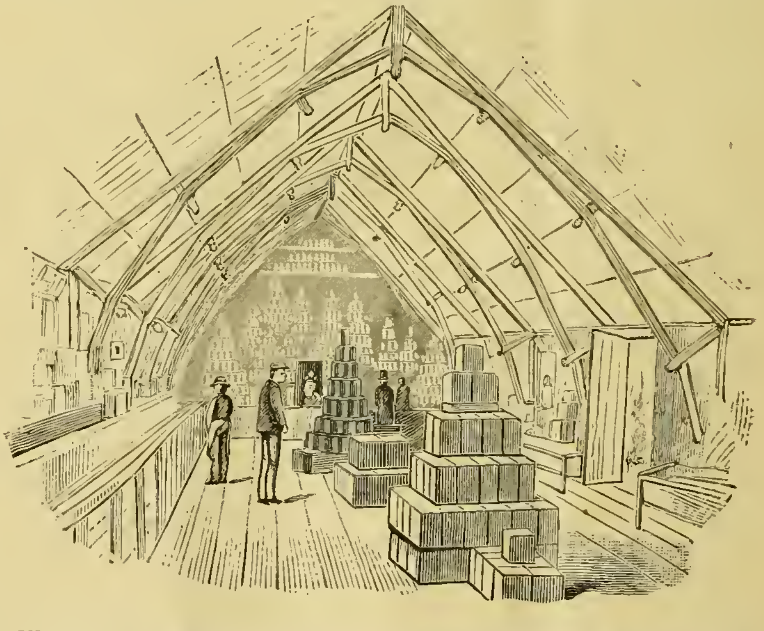
Pall Mall Budget.

Canadian Honey Exhibit in England.

The exhibit of the Ontario Bee-Keepers' Association, both for quantity and quality, it is probably the most remarkable exhibit of honey that has ever been displayed in this country. It has come over in charge of a deputation from the Association, who are at present on a visit to this country with a view to open the English market to the best honey in the world, as they constantly describe the article which they have on view.

. . . .

It was with peculiar interest that we bade Mr. Jones welcome as he entered our office with two other representatives of the Bee-Keepers' Association to give particulars concerning bee-culture in Ontario.



"We claim to be located in the very heart of the honey belt of the United States," he said. "It is a remarkable fact that the specific gravity and flavor of the nectar of the flowers improves as you go north, and attains its maximum in the region where while the winter is cold, the summer is warm enough to produce an abundance of flowers. That region is found by experience to lie about the latitude of the great lakes. If you draw a line from the north of Lake Superior eastward and westward until it reaches the Atlantic, and another line from Lake Erie parallel to it, you will enclose a tract of country which, in the United States and Canada, is the honey belt of the Continent; that is to say, there is more honey grown there, for gathering, than anywhere else in America. Ontario is situated, as you will see, right in the heart of this belt; and there we have established an industry which, although at the present moment but in its infancy, produces yearly a crop of honey valued at £100,000. That is a very moderate computation. We have 10,000 bee-keepers in Ontario, owning, on an average, 10 colonies each, or 100,000 together. The net annual profit of each hive we estimate loosely at a sovereign, although in many cases this is very largely exceeded. We reckon the yield of each hive—or colony, as we call them in Canada—to be about 30 pounds, taking good years with bad. It is very common for a colony in a good season to yield 100 pounds, and many produce 300, while on one or two occasions it has been known to produce 600 pounds, or nearly a quarter of a ton of honey in one season. Many have gone into bee-keeping as a livelihood, and follow it exclusively, as other men follow the rearing of sheep. I have eight apiaries with from 100 to 300 colonies in each. All together I have 1,000 colonies constantly on hand."

"How many bees do you reckon you have in each of your hives?"

"A good strong colony is from 30,000 to 40,000. Some will run as far as 60,000, but if you average them all at 30,000 you will not do badly. So that I have about 30,000,000 of bees constantly at work. The figure sounds large, but considering that the bee census returns of Ontario show a population of 3,000,000,000, my stock compared with that total is comparatively insignificant."

"What special advantages have you in Ontario beyond the United States?"

"Chiefly in the linden trees. In the honey belt of the United States there is also less clover than we have, and the lindens are scarcer. The linden crop of honey is one of the most important, for linden honey is invaluable in cases of consumption or chest complaints. Our forests are full of linden trees, and the yield of honey is enormous. If you shake the tree the honey drops upon you from above. It keeps the bees very busy all the time the linden is in flower."

"You speak of linden honey. Have you different brands of honey according to the different flowers which the bees frequent?"

"Certainly. Not of all kinds, but of three—clover honey, linden honey, and thistle or wild weed honey."

"How can you distinguish between the honey that is collected from clover, and that which is gathered from the linden trees?"

"It is very simple. Every scientific bee-keeper in Ontario uses the honey-extractor, by which the honey is expelled from the comb without injuring the cells. The comb is placed in a rapidly-rotating cylinder. The centrifugal force that is generated, forces the liquid honey through the waxen seal at the end of the cell, and the comb thus cleared of honey is replaced in the hive, and the bees at once begin to refill the emptied cells. The great point in bee-keeping, it must be remembered, is to save the bees trouble. The object of the bee-keeper is to produce honey, not comb. ....We have three honey crops in the year, and by ordinary care it is quite possible to keep them quite separate."

"Does the honey differ very much in flavor?"

"There is all the difference in the honey that there is in the flowers from which it comes. People sometimes seem to imagine that a bee is a kind of insect-cow, which browses upon flowers and converts the nectar into honey by a process somewhat analogous to that by which the cow converts grass into milk. A bee does no such thing. It simply taps the flowers, stores the nectar in its bag, and empties the unchanged nectar into the cells in the hive."....

"Honey in the comb we retail at Ontario for a shilling a pound. This is the finest white honey, and fully equal to that which is sold in your shops here at 2s. per pound. The extracted honey, which granulates and becomes, as you will see in our exhibit, as solid as butter, is sold at about 8d. per pound. There is no glucose or syrup in any of the Ontario honey. Our Association prides itself upon the purity of its produce, and offers a reward for the discovery of any adulteration. We are quite certain that it only needs that our honey be known for an extensive demand to be created, and we look forward with confidence to the result of the display of the products of our honey harvest in the Colonial Exhibition."

North American Bee-Keepers' Society.

REPORTS OF VICE-PRESIDENTS.

FLORIDA—FROM W. S. HART.

Bees here came through the winter in fine condition, but, notwithstanding that fact, 1886 has, without doubt, been the poorest year for honey that has been known in this State within the memory of the present inhabitants. In this part of the State (often called the bee-belt), where the greater portion of the State's crop is usually produced, there is, this year, no honey to ship; only enough having been produced to nicely carry the bees through to the harvest time of next season.

Bees commenced to work a little early in January on the maple; but on Jan. 9 to 11 we had the most severe cold snap that has been known for 51 years, and probably for considerable over a hundred, judging by the growth of mangrove killed at that time and still standing. This ruined our prospects for surplus white honey for the season, by killing the tops of most of the black mangrove trees, and of some the roots also. Many still hoped to get some white honey from the cabbage palmetto, but as some apiarists questioned its honey producing qualities, it was watched with much interest. The bees work upon it and the mangrove at the same time, and as the latter could not give a crop this year, the season was a pretty good test. The cabbage tree bloomed very freely, and the bees gathered little but pollen from it, and stored no surplus honey. A few days after the freeze the bees were at work again upon the maple. Honey and pollen came in slowly the rest of the winter and spring.

The colonies bred up very rapidly, and by March 1 more honey was consumed by the brood than was coming in, so that in April many colonies had to be fed. Swarming commenced early in March, and continued until May, although much of the time honey came in so slowly that all new colonies had to be fed immediately. March and April are usually dry months, but this year proved to be very wet. May and June, usually showery, were so very dry as to ruin the crop from bay, gallberry, saw-palmetto, and those plants and trees that usually give us an early surplus.

Then came the time for our main crop of the season from mangrove, which usuallly lasts until about Aug. 10, but this year honey was so scarce in June, July, and August that a bee-tent had to be used when working with the bees, to prevent robbing. The fall flow has also been unusually small, and the bees unusually inclined to rob. Most of us have doubled back all weak colonies, so as to carry through only the best of our stock.

Only a few reports have come in from other portions of the State in response to my inquiries, but those received all speak of small crops. Southwest Florida makes the best report, a small crop having been gathered from the wild pennyroyal early in the season. A fair increase of colonies is also reported from there.

In conclusion I will say that much of the black mangrove is putting out finely and even showed considerable late bloom.

GEORGIA—FROM DR. J. P. H. BROWN.

The honey crop for the State of Georgia has been about an average. While the Georgia honey will compare in body and flavor with any produced in the United States, it is much darker color than the average of the Northern product. Honey here is more difficult to classify as to its source, aa we have such a multitudinous variety of honey-producing plants.

Those bee-keepers who work their bees to the best advantage in frame hives, receive remunerative returns for the labor and capital invested. The bulk of the crop is sold at home, and near markets, and I am not aware of any shipments to Northern or Western markets being made. Most of the honey is taken to market in the comb, and that which is in nice one and two pound sections sells for fully 50 per cent. more than the ordinary comb honey offered by the old box-hive bee-keepers in buckets and tubs.

During the past year the bee-keeping industry has about held its own in the State—if any move has been made, it has been on the side of progress and improvement in hives, appliances, and bees.

ILLINOIS—FROM MRS. L. HARRISON.

Bees passed the winter of 1885-86 with very little loss, and the spring will long be remembered for its many genial and sunshiny days, so favorable for the development of young bees, and for the secretion of nectar.

Under these conditions, bees increased very rapidly, and hives were running over with bees when white clover bloomed. There were many cool nights during its blooming; yet the crop is a very fair average. As far as I have been able to ascertain, basswood never yields much in Illinois. The white clover bloom, with few exceptions, was followed by a severe and prolonged drouth, which cut short fall flowers, and only half a crop will be the result.

The intelligent management of bees is on the increase, and honey of good quality is abundant and cheap. The prayer of Father Langstroth, that every poor man might be able to have it on his table, is about to be answered.

INDIANA—FROM JONAS SCHOLL.

Bees wintered well in this State, and early spring found nearly all of our wide-awake bee-keepers with their full quota of colonies, and those colonies full to overflowing with bees ready to take advantage of the early flow of honey. The elm, willow, maple and sugar-tree gave more than the usual supply of honey and pollen. In short, the spring was very favorable for rapid building up of colonies, and bee-keepers were jubilant over the prospect of once more securing a full crop of honey. But in this they were again disappointed, for, as the season advanced, the weather was less favorable for the secretion of honey. Repeated heavy rains coming at the time when the flow of honey is usually best through the central part of the State, and drouth in the northern sections, cut short the honey crop, on a general average, fully one-half. Yet this half crop will amount to 600,000 pounds in our State. The quality is excellent, and the bulk of our honey finds a market within the State, as our bee-keeping friends have learned, years ago, to build up a home demand for their surplus.

Our main source of honey is white clover, with basswood north of the centre of the State. The yellow poplar, or tulip timber, was once valuable as a source of honey, but it is now becoming so scarce that but little surplus can be obtained from it.

Indiana compares favorably with other States in the industry of bee-keeping and the production of honey. Her varied and fertile soil can perhaps be depended upon to produce the different kinds of clover, equal to if not better than that of any of the Central States; and while no particular locality can be said to produce enormous yields, yet through the entire length of the State, from Lake Michigan to the Ohio river, everywhere, with but few exceptions, can bees be kept with profit. In the very important matter of wintering, Indiana bee-keepers can report as good results, generally, as others in the same latitude. In fact many of them are completely successful in carrying their bees through the winter. Statistics give the number of colonies within the State at about 80,000.

MICHIGAN—FROM PROF. COOK.

The season in most of Michigan has been characterized by a very severe and long continued drouth. Notwithstanding this I think the honey product of the State is fully 75 per cent. of an average. With us here it is fully an average. We find drouth and nectar may be companions. With almost no rain in May and June, we had a fine white clover harvest, and quite an amount of basswood honey. The latter yield was cut short. Autumn rains have given us a fine crop of golden-rod honey. Two points I wish to emphasize: 1. The importance of Alsike clover, which, even with an abundance of white clover, seems greatly to augment the June honey crop. 2. By the superiority of goldenrod among our fall flowers. These plants give much excellent honey.

I would add that, in my opinion, no one thing is more worthy the attention of bee-keepers than this matter of honey-plants. How often raspberry or Alsike clover make the honey harvest which otherwise would be nothing, or nearly so, quite satisfactory. May it not be that we could every year be sure of a crop, if we had plants like the Rocky Mountain bee-plant, or possibly the Chapman honey-plant, which, despite drouth or rains or cool days, would still secrete nectar in quantity? I doubt if any subject connected with bee-keeping is more worthy of attention.

PENNSYLVANIA—From A. Todd.

The spring opened in Pennsylvania with every prospect of a good yield of honey, but wet weather set in and continued with intermissions in such manner as to completely upset the anticipations of early spring. A short crop of honey is the result, as far as my knowledge reaches. The autumn has been more favorable, and bees will go into winter quarters in good condition. The consumption of honey is decidedly on the increase by the masses, forming the population of the city of Philadelphia, and on the whole; preference seems to be given to extracted honey.

I have to report the opening of a public apiary in the Zoological Gardens of this city (the first I think in the United States). Myself or a friend has, during each week, opened hives, explained bee-life, etc., to crowds of interested men, women and children. A photograph of this apiary will be mailed you herewith.

The use of honey in manufactures has occupied my attention, and honey candies, honey ice-cream, honey lemonade, and honey ginger ale, have been made and sold this season with a most gratifying result.

QUEBEC—From H. F. Hunt.

The past season has been under the average. The winter was comparatively mild with a good deal of rain during February. Spring opened early and warm; the months of May, June and July, however, were dry, and the nights rather cool, which interfered greatly with the secretion of nectar in the clovers and linden. Some bee-keepers report that they did not extract a pound of honey, bees having gathered just sufficient to carry them through the winter. The average of losses in winter appears to be 34 per cent., and of the crop gathered, 17 pounds per colony, spring count.

For the American Bee Journal.

St. Joseph, Mo., Bee and Honey Show.

J. W. GRAHAM.

The apiarian display at the Inter-State Exposition, at St. Joseph, Mo., about Sept. 1, 1886, was the finest ever held in the State. There were twenty exhibitors in the apiarian department, each striving to display not only his goods, but his ingenuity and skill in making them appear attractive.

Of bees, there were Carniolans, Syrians and Italians (imported and home-bred), as fine as the finest. There were 18 observatory hives; and the Kretchmer, Shuck, Armstrong and Heddon invertible hives. There were honey extractors, knives and foundation mills.

There was comb honey in crates, cases, and fancy forms; extracted honey in a variety of tin and glass vessels, arranged for the light to shine through the glass, giving it a transparency not always attained; and a very neat display of wax moulded in the shape of pears, looking so natural that the judges passed them, thinking they were natural fruit.

The ladies had the honey-cakes, and there were some fine displays of honey-producing plants, and several displays of apicultural literature numbering over twenty bound volumes each, besides samples of bee-papers.

But there was one general wish expressed, and that was that the Editor of the American Bee Journal was here to see how his "child" had grown. Many will remember that in 1881 Mr. Thomas G. Newman paid us a visit, when this department was in its infancy, and by a series of lectures laid the foundation of our present apicultural structure, of which we today feel so proud; and no effort will be spared next fall to have him here to enjoy, with us, the fruits of our joint labors.

Agency, Mo.

The following is another account which was sent without signature:

Having been attracted to the St. Joseph, Mo., Inter-State Exposition, by the liberal premiums offered in the apiarian department, aggregating over $250, I desire to note the wide-awake, progressive spirit manifested by the officers and directors of this Exposition, as I expected that such liberal premiums would bring out a fine display of everything appertaining to this industry.

I was astonished at the "prodigious" display, the neat and attractive arrangement by the many exhibitors of products of their respective apiaries, and the various implements used by them.

I will venture the assertion, however, that a finer exhibit was never made on this continent; and further, that no directors of any State, county or international association ever offered more liberal premiums, or provided for the requirements of exhibitors to as great an extent as did the officers of the St. Joseph Inter-State Exposition on this occasion. Nothing was asked of them (except space) that they did not grant. The number of exhibitors and their large displays was so far in excess of what was expected that a very considerable amount of honey was not unpacked. It was impossible to provide space to exhibit all that was intended for exhibition. Exhibitors from Illinois, Iowa, Nebraska, Kansas, Texas and Missouri were there with honey, both comb and extracted, in great abundance in very neat, attractive, and tasty packages. The comb honey was in half-pound, pound, and two-pound sections; nearly all in neat and handsome crates. There was on exhibition some few "caps" (starch or shoe boxes) taken from the old log gum. The extracted honey was in glass and tin pails, in bottles and jars of beautiful designs, holding from a half to three pounds; in kegs and tin cans holding from 25 to 100 pounds.

There was an elegant display of beeswax in a large number of different designs. Twelve entries were made for premiums on the best all-purpose hive, each of different design or pattern, showing that all bee-keepers are not as yet convinced that the Langstroth hive cannot be improved, or that the Heddon sectional hive is the *ne plus ultra*.

Several very handsome observatory hives (in full blast), showing the storing of honey, comb-building habits, and economy of a colony of bees, with drone and worker comb in with eggs, larvæ and capped and hatching brood, queen-cells, etc., which called forth a great many expressions of astonishment and admiration. In fact no other department of this great Exposition was as attractive to the thousands of visitors.

Read at the Indianapolis Convention.

Feeding Bees for Winter.

JAS. M'NEILL.

In advocating the practice of feeding bees sugar syrup for winter stores, it may be well, in the first place, for me to consider some of the objections which are urged against the practice.

It is said that sugar feeding has a tendency to diminish confidence in the purity of honey. This is undoubtedly true. In many communities fully nine-tenths of the people believe that all extracted honey is adulterated. They have read that it is adulterated; nearly all with whom they talk are of the same opinion, and what is so generally accepted needs but slight evidence to be converted into absolute truth. When, therefore, such persons hear of a bee-keeper receiving a ton or more of sugar, and see him carting it through the streets to his apiary, they wink knowingly, smile self-complacently, and sagely remark: "That settles it."

Even a bee-keeper of well established reputation has enough to do to successfully combat the ignorant prejudice against his product without himself furnishing confirmatory proof against its purity. Nevertheless every thoroughly honest, self-respecting man feels that his manhood is degraded when he is called upon to forego what he thinks is a manifest advantage simply out of deference to the prejudice, ignorance and narrow-mindedness of his neighbors. He who sturdily pursues a straight-forward, manly course in the conduct of his business, is sure to gain the respect and esteem of his fellow-men; and though his pecuniary interests may suffer for a time because of ignorance and prejudice, in the long run his independent honesty will bear its legitimate fruit in increased honor and confidence.

Again, some bee-keepers object to sugar feeding because of a desire, which has in it something of the sentiment of fealty to our avocation, not to build up the sugar interests at the expense of the honey-interests.

It is estimated that there are 3,000,000 colonies of bees in the United States, and that the annual yield of honey is 120,000,000 pounds. It is also estimated that 25 pounds of honey are required to winter a colony of bees. Now, if every bee-keeper should follow the practice of replacing this 25 pounds of honey with syrup, it is clear that the surplus honey of the country would be increased more than one-half, and that an already over-burdened market would be still further depressed. Hence, the cry, "Do not elevate the sugar interests at the expense of the honey interests," seems to have in it the ring of worthy fealty to the brotherhood of bee-keepers.

Let us, however, look at this matter from another stand-point. When we read the history of bee-keeping for the past 15 years, and reflect upon the great progress which the science has made, and the means by which this progress has been secured; how books and periodicals have multiplied through which every new idea has been spread abroad as soon as it was evolved; how the East has been traversed at great expense and discomfort for better races of bees; how queen-breeders have vied with one another in their efforts to produce the most prolific queens—bees with tongues long enough to reach the honey in any flower—bees that get up earlier, stay out later, work harder, live longer, winter better, and sting as little as possible; how supply dealers have multiplied, and flooded the land with their circulars;—when we reflect upon all these things, we marvel that some faithful friend of our chosen pursuit has not risen in solemn protest against this diffusion of knowledge, and this enlarging of our borders. For certainly this progress of which we boast, and in which we rejoice, has exactly the same tendency as sugar feeding, namely: to increase production and to diminish prices.

In this matter, then, of sugar feeding for winter stores, the chief question involved, according to my view, is one of dollars and cents. If bees winter better on sugar syrup than on honey, and if, all things considered, it is money in the pocket of the bee-keeper to feed syrup, then let all who so believe act upon their belief, undisturbed by any conscientious scruples concerning their want of fealty to our brotherhood.

But there are those who believe that syrup is no better than honey for wintering bees. It may not be better than some honey, but that it is better than the honey which is usually found in the brood-combs at the close of the season, I have not the slightest doubt. My own experience corroborates this view, and it is supported by the unequivocal testimony of some of our best bee-keepers. Others, again, claim that honey and sugar are so nearly equal in price that the sugar-feeder has all his labor for nothing. Let us see how this is.

The best granulated sugar in New York market is quoted at 6 to 6 1-3 cents. Clover honey is also quoted at 6½ to 7 cents. For the sake of convenience we will call them both 6 cents at the apiary. According to my method of making syrup—2 pounds of sugar to one of water—the 25 pounds of syrup needed for each colony would cost one dollar, while the 25 pounds of honey would be worth $1.50. Now I can make the syrup for 100 colonies, and feed them in three days; while the 2,500 pounds of honey would take me as long to extract. A saving of 50 cents on a hive would amount to $50 on 100 hives; and this would represent the wages of a week's work; and there are few bee-keepers who would not be satisfied with such remuneration.

But some may say that syrup made in the proportion of 2 to 1 is not the equivalent of honey. Be that as it may, in my experience 25 or 30 pounds of syrup so made has always proved ample to carry a colony of bees through from September to fruit bloom, and that is the amount of honey which it is pretty well agreed is necessary to winter a colony out-of-doors. Feeders cost something, it is true, but the expense in that direction need not be more than $5 or $6 per hundred.

I will now give in detail my method of feeding. If the narration shall discover to my fellow bee-keepers any good points, or if it shall call out the good points in their methods, the chief objects of this paper will be accomplished.

I begin to prepare my bees for feeding about the middle of September. The brood is usually then reduced to 3 or 4 frames. The bees are contracted to 6 frames, a chaff division-board being placed on each side of the frames. The amount of honey in the frames containing brood is carefully estimated, and the number of pounds which it falls short of 25 or 30, according to the strength of the colony, is marked on the corner of the cover. The amount of honey left in the hive usually runs from 2 to 5 pounds. This is enough to ensure the bees against starvation till I get around with my feeder. When the hives are all thus prepared, an empty body is placed upon each, and I am ready to commence feeding.

My feeder is an inexpensive affair, made of a gallon paint-pail and a tin pie-pan. These pails can be had for 2 or 3 cents apiece from the painters, and the pans, I believe, are worth $3 per hundred. Two nicks are cut in the edge of the pails three-eighths of an inch in depth. These are to allow the syrup to flow out when the pail is inverted. Being filled with syrup, a pan is placed on the top of the pail and it is quickly inverted. The syrup is held in the pail by atmospheric pressure, while the nick in the pail allows the pan to remain about half full. These feeders are placed on the top of the frames inside the empty body, and the syrup, being close to the bees, is readily taken, even during cool nights.

I use the best granulated sugar in making my syrup. I have a boiler which holds 88 pounds of water, and a keg which holds 88 pounds of sugar. When the water reaches the boiling point it is poured into a barrel, and upon it are thrown two kegs of sugar. This is stirred till the sugar is thoroughly dissolved, when the syrup is drawn off into the feeding pails. These are then carried out and placed on the hives while they are yet quite warm.

By the time the pails are distributed another boiler of water is heated, and if we have pails enough, we may keep up our syrup making and feeding until every hive has a pailful. By the next morning the pails are emptied, and the operation is repeated until each hive has its amount.

My feeder would be improved by having a larger pail. One which would hold 13 pounds would, as a rule, supply the required amount to a colony at two feeds. Whereas, with my feeder, holding about 9 pounds, it is necessary to go over most colonies three times. But the larger pails would cost $14 or $15 per hundred, while the pails which I use cost comparatively nothing.

Read at the Indianapolis Convention.

Reversible Hives and Frames.

J. E. POND, JR.

The matter of reversible frames and hives is one that is to some extent engrossing the attention of the bee-fraternity, and I have chosen that topic, not that I feel that I can do the subject full justice, but that I may put myself squarely on record, so far as my views in regard to the matter are concerned; and you will please bear in mind that I state views and opinions only, and not in a dictatorial manner, and that I stand ready at all times to defend the position I have taken, without claiming that I alone am correct, and those who differ are in the wrong.

In the first place we are led to ask, what is the necessity for departing from nature's laws, and the well settled practice of ages? The only answer that I have as yet seen is, that by reversing frames we cause the honey they contain to be carried into the sections placed above them. If there is any other answer I have not seen it. Now this so-called advantage is more problematical than real, but the theory when first stated possessed enough plausibility to lead myself to accept it without testing, and give it my unqualified approval. The first tests I made, however, showed me its falsity, and I at once "reversed" my opinion and made public that reversal.

In practice, reversing frames is unnatural. So far as the method relates to sections it is of considerable value, and many of them that would otherwise be incomplete can be made perfect. It is true, also, that occasional poorly filled frames can be improved by reversing them; but so far will the plan go and no farther to advantage. It is unnatural, and furthermore, uneconomical. All the honey forced into sections by the process of reversing, is so forced at the expense of time and labor, caused by the removal; and this would be saved by causing the honey to be deposited in the sections when first gathered. Again, it is so forced at the expense of the life of the colony itself. The brood-nest is completely broken up, and the bees left in a terribly bad condition to withstand an inclement winter season.

I need not say that in order to get the best results, we must work in accordance with natural laws, and not give our bees an extra or unnecessary step to take, or amount of labor to perform; and it can at once be seen that when honey is first deposited in the bottoms of the frames, and then re-conveyed into sections, that extra time is used and extra labor done, unless it is assumed that the honey could not have been forced into the sections otherwise. Now I admit that he who finds fault without offering a substitute is entitled to no consideration whatever. I do not propose to be caught in that trap, and so I offer a substitute; one that is in direct accordance with the laws that govern the economy of the honey-bee and hive; one that is plain, simple and inexpensive, and one that works alike every time, and without a single failure.

One of the chief reasons why the frame hive has not been a complete success, so far as controlling swarming, and the getting of surplus placed where desired, is owing to the fact that we have not builded as well as we knew. We have known all the time that bees would not seal up brood in cells more than 7-16 of an inch deep. We have known also that they would not seal up stores in shallow cells, when they could find deep ones for that purpose. This in itself ought to indicate what is required; but it would seem that the remedy is so simple that it has not been applied. That remedy I have offered in the bee-papers, and I again offer it here and as follows:

Work the frames in the brood-chamber just seven-eighths of an inch thick, and just bee-space apart. By this means no cells will be built over 7-16 of an inch deep, and if sections with deep cells are given, nothing but brood will be deposited in the brood-chamber, so long as sufficient room for stores is given elsewhere. One of the recommendations this method has, is, that it requires nothing but what is found in every apiary. No new traps of any kind are required, and further, when the surplus crop is stored in sections, the brood-chamber will be found in the best possible condition for wintering.

In writing the above I have purposely refrained from going further than stating my position, in order that nothing but a topic for discussion may be presented. I trust that the subject will be ventilated, and I assure you that I have no "ax to grind" in presenting my ideas.

☞ **The Patsaliga Bee-Keepers' Association of Ala., request bee-keepers throughout the State, to meet delegates from this Association in Montgomery, Ala., on Nov. 9, 1886, for the purpose of forming a State association. The State Agricultural Fair will meet there on Nov. 8, and hold one week. Liberal premiums are offered to bee-men. Let me hear from every bee-keeper at once.**

J. R. McLENDON, *Pres.*, Stoddard, Ala.

Local Convention Directory.

1886. *Time and place of Meeting.*

Nov. 24, 25.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Scent of Honey.—J. Chapman, (7), Woodville,⊶ Mich., on Oct. 11, 1886, writes:

I was somewhat surprised when I read Prof. Cook's answer to Query 313. I had always been told from boyhood that bees would scent their honey with peppermint when gathering nectar from that plant. In the year of 1884 I extracted 100 pounds from the hives in my apiary, that was nicely flavored with peppermint. The nectar was obtained from the peppermint plant growing along the creeks about a mile from my apiary—and no peppermint bottle concerned in the matter.

Infertile Queen.—Louis Werner, Edwardsville,♀ Ills., on Oct. 19, 1886, says:

I send a queen that has not laid an egg in four months, and I wish that Prof. Cook would give her a trial test, for it is something that has never before come under my observation. She was hatched on June 25, 1886.

[As will be seen on page 77 of my "Bee-Keepers' Guide," I mention this as an occasional peculiarity of queen-bees, and comment upon it. That queen-bees should be occasionally infertile is no more surprising than that other animals, even to the highest, should be so. It is due to some abnormal or defective peculiarity of the queen's reproductive organs.—A. J. Cook.]

Bees Still at Work.—Mrs. O. T. Jackson, Sigourney,⊸ Iowa, on Oct. 20, 1886, writes:

We are having lovely weather for October, and very little frost yet; nearly every thing has the appearance of summer. The white clover is in bloom, and the bees are quite busy gathering honey from the red clover. On Oct. 12 I visited the apiary of Mr. Sears, of Thornburg, Iowa, 17 miles from here. He is a member of our State Association, and a practical bee-keeper. He has about 300 colonies, and his son, who is also an expert, very kindly offered to show me through his apiary, honey-house, and the rows of beautiful honey. Joining this is his work-shop where he makes all his hives, frames, etc. I also saw the cellar where he winters his bees, and took notes of his manner of ventilation, etc. He is a reader of the Bee Journal. Mr. Sears does not paint his hives, as he thinks that they retain moisture, and there is more dead bees in the spring in a hive that is painted than in one that is not painted. I would like to know whether Prof. Cook thinks it makes any difference.

Report for 1886.—W. M. Woodward, Custer,⊶ Ills., on Oct. 12, 1886, says:

The best honey flow of the season was from the yellow willow, and the honey is nice. It is losing the bitterness of the flavor with age. The white clover crop was prolonged, but slow and tedious, and gathered with much labor for both man and bees, but a fair crop was secured. Heart's-ease only yielded surplus honey about two weeks, and then slow, and the crop is light. All around we have perhaps a little over an average crop. My best colony of brown German bees gathered 190 pounds of comb honey in one-pound sections. My total crop was 1,400 pounds of comb honey and about 300 pounds of extracted honey from 17 colonies, and increased to 54 colonies, all in good condition for winter.

Malignant Foul Brood.—A. H. Noble, Nashville,♂ Tenn., on Oct. 18, 1886, writes:

I purchased some 3 and 4 frame nuclei last spring and gave them empty combs. They built up rapidly, and did well during the honey flow of May and June, but since then they have been on the decline, gradually dwindling. Through my ignorance I supposed the queens were not doing their duty, therefore I commenced feeding them liberally, to "stimulate" the queens, as a bee-man would say. But all to no purpose. The queens looked fine, and I always found plenty of eggs in the cells, but they never hatched, became rotten, the grub turning to a brown, ropy substance, very offensive to the smell. It finally dawned upon me that it was foul brood. In fact I was pretty well satisfied that this was what ailed them. So in my helplessness I sent for a practical bee-friend of mine, who came over with his bound volumes of bee-papers, and proceeded at once to diagnose the case. The first hive we opened convinced him. Says he, "I would not have my apiary in this fix for $500." But he could tell me nothing to do for it, but to destroy them all. Well, I have been reading up remedies ever since, and I concluded that I must do something. The disease has left them all more or less weak, so I have decided to unite them, making 2 strong colonies out of my 6 weak ones; for if they are curable, I can operate on 2 colonies better than I could 6. I am now at "the end of my rope," and if any of the veterans in the business can suggest anything that will be of any service to me, I would be pleased to hear from them. There is no doubt that mine is a well developed case of malignant foul brood, corresponding precisely with all descriptions given of it. I have only 6 colonies, but if I am advised to destroy them, they shall go.

[The only safe way for an amateur is to destroy hive, bees, and all, at once. It is too dangerous for such to experiment with foul brood in its malignant form.—Ed.]

Only Half a Crop.—H. L. Wells, Defiance,⊸ O., on Oct. 9, 1886, says:

I commenced last spring with 47 colonies, sold 3, doubled up the balance until I had 40 average colonies. I increased them to 100 colonies, and averaged 50 pounds per colony, spring count, 650 pounds of comb honey, the balance being extracted. Owing to the drouth the honey-flow ceased three weeks sooner than usual. The basswood was a total failure here. To average up, there was not over a half crop in this section. I think I did the best of any one in this locality, but it took hard work, and I did not let the bees lose a minute while the flow lasted. Besides the honey that I took off, I have an abundance to winter my 100 colonies without feeding a pound of sugar or anything else.

Bee-Keeping in Florida. — John Craycraft, Altoona,⊙ Fla., on Oct. 6, 1886, writes:

I find that I cannot keep bees without the American Bee Journal. Its scientific teachings apply to this climate if double-walled chaff hives and cellar wintering do not. Our winters here do not require such fixtures. I use a single-walled Simplicity hive, loose bottom-boards, and the best of tin roof, and all painted white. I also use 10 frames, 9⅛x13½ inches. This size suits me and my methods and wants better than any other. I reared queens early in the season, then for comb and extracting, tiering them at times to four stories. For comb honey I use cases holding 18 one-pound sections, tiering them up as the bees progress in filling them, always placing the empty cases under the one partly filled. I work my frames close in the brood-chamber—ten frames in a space of 13 inches; but alone for extracting I use nine in the same space. I work all of my nuclei for rearing queens in the same size hives, only one story. When I double up I place the queenless colony over the one having the queen, leaving the enameled cloth between them, only turning up a little in one corner so that the bees will find their way below slowly. All will be right in a day or two. Very few bees will return to the old stand. The combs can be changed to suit the colony, and the cloth removed from between them on the third day.

Pleurisy-Root.—John Haskins, Empire Prairie,⊸ Mo., on Sept. 27, 1886, writes:

On page 552, Mr. Heddon gives a good description of the pleurisy-root as a honey-plant; but he is mistaken in thinking that it does not grow on the rich prairies. The prairie here is very rich, the soil is black, and the pleurisy-root grows all around here. It grows from 2 to 2½ feet high; one root here on the richest soil will probably keep hundreds, if not thousands, of bees busy daily for weeks, and if you wish them to bloom late in the season, just cut them off. The roots grow to a large size here. The seeds can be sown like cabbage seed. Try some this fall, and next spring when the plants are large enough, plant them in rows 3 to 4 feet each way. One thing Mr. H. did not speak of, is that it seems to furnish no pollen, or scarcely any for the bees. I send you some of the seed in this letter, and some of the pods in a package.

[Thanks for the seed and pods, which were duly received.—Ed.]

Italians vs. Black Bees.—S. L. Watkins, Placerville,⊙ Calif., on Oct. 6, 1886, writes:

I increased my apiary from 4 colonies to 16, and took from 1 colony of Italians over 300 pounds of comb honey; from my best black colony about 80 pounds. My Italians have shown themselves so far ahead of the black bees that I will change them all to Italians next season. They are storing honey from the hartshorn, and the blacks are not doing anything. Our main honey-plant here is falacio, a small shrub about one foot high. It has a fern-shaped leaf, and a blossom something like a strawberry. It yields honey for about two months, and the honey from it is as good if not better than that from white clover. It is also very thick, and weighs about 11 pounds to the gallon. California lilac is a pretty good honey-plant, and the bees worked very hard on it this season.

My Report—Asters.—Otto Bussanmas, Bevington,⊙ Iowa, on Sept. 25, 1886, says:

In the fall of 1880 I obtained 7 weak colonies in all kinds of boxes and log gums. I lost all of them the following winter, but I was not discouraged. I then bought one colony in June, 1881, and by the fall of 1884, I had increased it to 33 colonies, but I lost like all other bee-keepers, and the balance (11 colonies) were very weak. I increased them to 31 colonies in 1885, and extracted 1,600 pounds of honey, and this year I have increased the 31 to 65 colonies, and harvested 3,400 pounds of white clover honey, and I think by the time I have all of my fall honey taken off, that it will be 1,200 or 1,600 pounds, besides leaving them from 35 to 45 pounds for winter. I do not believe in feeding sugar to bees and selling the honey. My bees are still busy. I went out to-day to see what they could work on, and I was surprised to find them on white and red clover. I found three kinds of flowers on the bank of a creek not far away, where the bees worked as hard on them as if it had been linden or white clover. I will call them Nos. 1, 2 and 3. Will you please name them?

[Nos. 1 and 2 belong to the family of asters, and No. 3 to the mint family.—Ed.]

Honey all Disposed of.—J. Meader, Delaware,⊶ Iowa, on Oct. 6. 1886, says:

I have endeavored to profit by the reading of the many valuable articles contained in the Bee Journal from time to time. I have always tried to furnish my honey in the best condition possible. I have never had any one to find fault with my sales. My crop for this year is all sold at good prices. I have held all my old customers, and have gained many new ones. This can only be done by honest and fair dealing.

One of the Asters.—A Clendenin, Morrisonville,⊙ Ills., on Sept. 30, 1886, writes:

What is the name of the enclosed plant? My bees work on it from morning until night.

[It is one of the asters.—Ed.]

Convention Notices.

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 18, 19 and 20, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised. An unusually brilliant programme will be prepared and announced later.

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. Cutting, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Nov. 24 and 25, 1886.
J. M. Hambaugh, *Sec.*

☞ The next meeting of the Bee-Keepers' Association of Hamilton and Tipton counties, Ind., will be held at Westfield, Ind., on Saturday, Nov. 6, 1886. The following interesting programme has been arranged: Opening exercises; Music; Address of welcome, H. Mills; Best method of wintering bees, D. Leaming; Discussion opened by Marion Moore; Best method of realizing the largest amount of profit on a colony of bees M. Doherty; Discussion opened by Isaac Booth, Best method and time to prepare the bees for spring work, Zimri Kivett; Discussion opened by Dixon Bray; Question box. All interested in bee-keeping are invited to come, bringing their baskets well filled, so as to stay all day, and make this one of the most interesting and profitable sessions that the Association ever held.

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. Patterson, *Sec.*

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Receipts are liberal and prices vary from 10@13c. per lb. for white in sections varying from 1 to 1¼ and 1½ lbs. Many sales of good white 1-lb. sections are made at 11c. Extracted is quiet and ranging from 5@7c.

BEESWAX,—23@25c. R. A. BURNETT,
Oct. 13. 161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

McCAUL & HILDRETH BROS.,
34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

Blake & Ripley, 57 Chatham Street.

DETROIT.

HONEY.—Best white in 1-lb. sections, 12@13c.; dark, 10@11c., with a good supply in commission houses.

BEESWAX.—23c.
Oct. 10. M. H. Hunt., Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is fair for choice comb in 1 and 2 lb. sections, which brings 12@15c. a pound in a jobbing way, according to quality and neatness of package. There is a fair retail and jobbing demand for extracted in square glass jars, while the order trade for dark grades from manufacturers is improving. Range of prices for extracted is 3½@7c. per lb.

BEESWAX.—It is in good demand, and good yellow brings readily 20c.

Oct. 9. C. F. Muth & Son, Freeman & Central Av.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. Kendel, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.

Oct. 2. A. V. Bishop, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted; 3¼@3¾c. for amber extracted; and 8@11c. for comb honey in 2-lb. sections; 12@13c. for 1-lb. sections.

BEESWAX.—It finds buyers at 20@23c.

Sep. 28. Schacht & Lemcke, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.
Oct. 18. O. B. Smith & Co., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¾c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Dull at 21c. for choice.

Oct. 21. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand for all grades is good, and sales are large. Receipts are good and prices are steady with a firm feeling. We quote: 1-lb. sections of white clover, 13@14c.; dark, 10@12c.; 2-lbs. white clover, 11@12c.; dark, 9@10c.; Calif. 2-lbs., 9@11c.; ½-lbs. white clover, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5½c.; Calif. amber, 5c.

BEESWAX.—20@22c.

Oct. 15. Clemons, Cloon & Co., cor. 4th & Walnut.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¼c. per light, extra.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by the bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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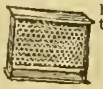

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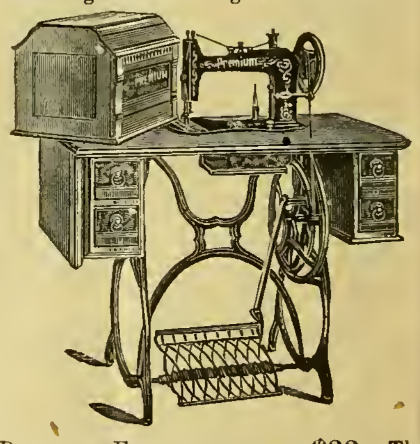

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IN accordance with a previous notice in bee-periodicals, I am now prepared to fill orders for the seed of the above plant at the following prices: ½ ounce, $1; 1 oz., $2; 2 oz., $3; 4 oz., $5; and ½ lb., $8. One ounce contains from 1,600 to 1,800 seeds. On account of extreme drouth my stock of seed is limited an persons ordering will be served in rotation. The seed should be sown in early spring and general directions for cultivation will be given on each package.

This plant is not an obnoxious weed, but is as easily eradicated as clover. Having carefully watched its habits of growth and its honey-producing qualities for the past six years I believe those who commence its cultivation in a liberal way will be better pleased than by commencing with a small quantity of seed. It has been tested by prominent bee-keepers all the way from Vermont to Nebraska and Ontario. We refer to the report of the committee appointed by the North American Bee-Keepers' Society held at Detroit in 1885. The committee reported at the Indianapolis, Ind., convention held Oct. 12–14, and their report will be found in all bee-papers publishing the report of that convention.

Write all orders plainly and give your post-office address in full.

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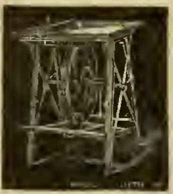

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CRATES for 14 seven-to-the-foot or 12 pound sections:—**8 cents** each; 10 or more, 7½ cents; 50 or more, 7 cents each. **Glass** for same, 1½ cts. each; 100 or over, 1¼ cents each

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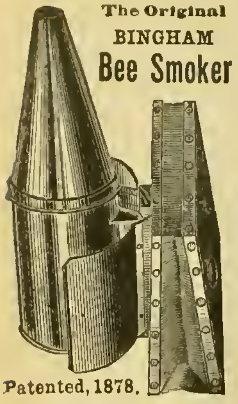

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ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am *boss*—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

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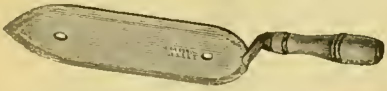

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Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife,	2 inch	1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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What to Eat,	Parasites of the Skin,
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How to Breathe,	How much to Wear
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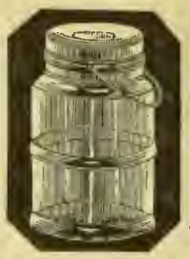
GLASS PAILS
FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	$1.60
" 2 pounds " "	2.00
" 3 " " "	2.50

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FIRST IN THE FIELD!
THE INVERTIBLE HIVE!
INVERTIBLE FRAMES,
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Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

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FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

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WILL be sent one year and a copy of the 3rd Edition of the Bee-Keepers' Handy-Book, on receipt of $1.50. The book contains 300 pages and 100 fine illustrations.

HENRY ALLEY,
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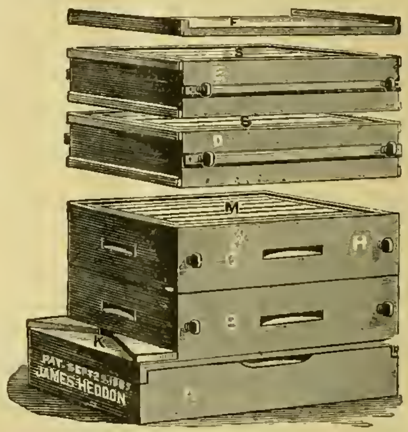
The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
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THE BRITISH BEE JOURNAL
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The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Nov. 10, 1886. No. 45.

Never Mind the crowd, lad,
  Nor fancy your life won't tell ;
The work is done for all that,
  To him who doeth it well.

Fancy the world a hill, lad,
  Look where the millions stop ;
You'll find the crowd at the base, lad,
  But there's always room at the top.

Keep your eye on the goal, lad,
  Never despair or drop ;
Be sure that your path leads upward—
  There's always room at the top.

* * *

The Rev. Robert West, editor of the *Advance*, whose name occurred several times in the early numbers of this volume of the BEE JOURNAL in connection with the stories afloat concerning the alleged manufactured comb honey, died quite suddenly, a few days ago, of apoplexy.

* * *

A Prize of $10 was awarded to Mr. E. C. Jordan, at the Winchester, Va., Fair for an excellent exhibit of honey wine. Also one of $3 for a wagon-box ink-stand. We also notice by the Winchester *Times*, that his son, E. C. Jordan, Jr., took five prizes on farm stock. He is no doubt a worthy son of a noble sire.

* * *

Honey for Catarrh.—A noted physician makes the following remarks : "When a tea-spoonful of warm honey is taken every 15, 20 or 30 minutes, it has a surprising effect on catarrh. Every family should have pure liquid honey in the house, in order, at once after catching cold, to be able to use some."

* * *

Fanciful Design.—At the Maine State Fair, Mr. Norton's name over his exhibit was something of a curiosity. The letters were first cut out of a strip of wood prepared for the purpose, the places being filled with foundation. This the bees drew out, filled with honey and capped over. Then it was framed, a piece of glass having first been put over the letters, and made an appropriate sign for his exhibit.

Is it True?—We find many items like the following taken from an exchange, going the rounds of the press, referring to the late convention at Indianapolis :

> There was a deluge of essays and papers, most of which had been written and forwarded by absentees. All could not be read, and to provide against another such freshet of lucubrations, it was resolved that hereafter, the effusions of absent members should only be read in rare cases of special interest and merit.

Well, that is sublime ! The facts are that there were 14 essays read, exclusive of the opening speeches ; and of these only 4 were from absentees. These were from Messrs. Aspinwall, King, McNeill and Pond ; and we feel quite sure that each one of the writers were solicited to send an essay—they did not want to do so for the *fun* of the thing. Instead of saying that "most of the essays were from absentees," please say that about one-fourth of them were from absentees. Justice to these writers demands this public refutation ! The editor of the BEE JOURNAL has often been solicited to send an essay to a convention (he generally declines the honor, however) ; but how he would feel to be one of the much-abused absentees ! Such assertions are unjust, absurd and insulting, after sending an essay upon urgent solicitation.

* * *

The Duty of the Hour.—In the *American Agriculturist* we find the following very sensible remarks concerning the present and future of our calling :

> Every observing bee-keeper has noticed the effect upon our calling of unprofitable seasons like that just closed. Many will become discouraged, others will be indifferent and careless, and the result will be a great loss in bees, combs and fixtures. It is a noticeable fact that such a poor season is almost sure to be followed by a good one. This being the case, every prudent and far-sighted bee-keeper will see the desirability of keeping his stock in the best possible shape, and of holding himself in readiness to make the most of a better season when it comes. We should remember that this is but a temporary embarrassment. We should avail ourselves of every advantage to winter our bees successfully. Preserve all surplus combs and sections, keeping them in the best possible condition for use next year. Seasons like this just past are full of experiences that cannot be acquired in any other way.

* * *

Bees for a Body-guard.—In *Longman's Magazine* we find a very peculiar item about bees, which is credited to Mr. Froude, in his book entitled "Oceana." It reads thus :

> We found, for one thing, the New Zealand honey especially excellent, taken from the nests of wild bees, which are now in millions all over the colony. They are the offspring of 2 or 3 colonies which were kept, when I was at Oxford, in the rooms of Cotton of Christ Church, between whom and his bees there was such a strong attachment that a body-guard of them used to attend him to lecture and chapel. Cotton went to New Zealand with Bishop Selwyn, and took his bees with him, and they were multiplied in this marvellous manner.

Now-a-days they are not much admired in the capacity of body-guards. In fact, people generally prefer to guard their bodies from the bees—especially if they know but little about their culture.

* * *

To all New Subscribers for 1887 we will present the rest of the numbers for 1886 ; so the sooner they subscribe the more they will get for their money.

American Bee-Papers.—One item in an essay read at the Indianapolis Convention, which escaped notice, was the following :

> America stands ahead of all the world in bee-keeping. Look at the array of bee-papers ! It is greater than all the rest of the world combined—two weeklies, one semi-monthly, and three monthlies, to say nothing of numerous other periodicals that combine bee-keeping with something else. To say that we have a greater number of apicultural papers, and to say we are in advance of all the world in our art, means one and the same thing.

The assertion that our American bee-papers out-number those of "all the rest of the world combined," will be quite amusing, to say the least, to the bee-keepers of Continental Europe. Germany *alone* has more bee-papers than America, and had the essayist said that Germany had more of them than "all the rest of the world combined" (including America), it would have been far nearer the truth ! We mention this, not because we like to criticise, but to give the facts ; because European apiarists are fully aware that the editor of the AMERICAN BEE JOURNAL knows better, and we do not wish to be held responsible for the statement, even though we have printed it.

* * *

In the Destruction of nearly two-thirds of our primeval forests, by the march of civilization on this continent, we have not only lost the forest bloom from which bees gathered honey in the summer, but also the protection afforded by such in the winter, as well as increased the danger of spring floods and summer drouths. This is a serious matter to apiarists, and a very strong argument for planting bee-forage, and surrounding the apiaries with basswood and other trees for protection as well as honey-production.

* * *

Paper Fuel for Smokers.—The Indiana *Farmer* of last week contains the following concerning using paper rolls for smoker fuel :

> Some find paper so useful in making smoke for quieting bees, that they buy it in large rolls. To get it in shape to use in smokers, take a stick one half inch square and three feet long, and roll the paper around the stick until it is of sufficient size to fill the barrel of the smoker. Let an assistant tie a string around the roll every five inches. Then withdraw the stick, and saw up the long roll into six short ones, and they are ready for use.

* * *

The Report of the Indianapolis Convention is now published in pamphlet form, uniform with that of last year. It will be sent postpaid for 25 cents to any address.

We have also bound it up with last year's, together with the History of the Society ; this we will mail for 40 cents. Or if you send us one *new* subscriber (with one dollar) besides your own renewal, we will present you with a copy by mail.

* * *

Frank Leslie's Popular Monthly for November contains a very timely article on "The Great Fishing Ground, and its International Questions." As good as a jaunt to Jena is "Dueling at a German University ;" and the "Trip to the Pyrenees," takes the reader to the mountains which cut off the Peninsula from ordinary travelers, etc.

QUERIES AND Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Pollen Alone for Bees.

Query, No. 332.—Can bees live on pollen alone, or will they starve during a drouth, or when the flowers yield no honey, if they have plenty of pollen but no honey?—Dawson, Ky.

Bees cannot live on pollen alone.—W. Z. HUTCHINSON.

I think they would soon starve.—A. J. COOK.

No, sir, they cannot live on pollen alone.—J. P. H. BROWN.

Bees will not live on pollen alone.—H. D. CUTTING.

I had bees starve with plenty of pollen in the combs.—C. C. MILLER.

They would starve every time, according to several tests which I have made.—G. M. DOOLITTLE.

They will starve on pollen, but when there is pollen in the field, there is almost always some honey.—DADANT & SON.

I have never witnessed such a test, but I believe that the bees will starve, though the pollen would prolong their life some.—JAMES HEDDON.

Bees cannot live on pollen alone in winter confinement. I cannot say as to summer time, as we never had a time here when the flowers yielded nothing. I have noticed that when bees swarmed-out from nuclei, that they leave no pollen.—G. L. TINKER.

They cannot live on pollen alone at any time of the year. I have had ample opportunity to test this matter. There is nothing whatever in the whole pollen business except that pollen is the natural food of the honey-bee while in the larval state.—G. W. DEMAREE.

Bees cannot live on pollen alone. They will starve unless they have a supply of honey or its equivalent for food.—J. E. POND, JR.

Do Drones Work?

Query, No. 333.—Have you ever seen a drone on bloom at work? I have always heard that drones did not work or gather anything from bloom. This is a question of some importance here.—B. S. F., Indiana.

No.—C. C. MILLER.

No.—J. P. H. BROWN.

No.—H. D. CUTTING.

Drones do not work on blossoms, or otherwise. They feed in the hive.—DADANT & SON.

No, I never have seen drones work, and I am quite firmly impressed that I never shall be able to see it.—JAMES HEDDON.

I have never seen a drone at work on flowers. It is not their work.—A. J. COOK.

I never have, nor do I believe they ever do so long as they have the "run" of the hive.—G. M. DOOLITTLE.

I have never seen a drone upon a blossom, and I am at a loss to know why the question is of more importance in Indiana than elsewhere.—W. Z. HUTCHINSON.

I have never seen a drone on a flower sipping nectar, and I do not think any one else ever did. They, however, have a use in the hive that has been grossly berated.—G. L. TINKER.

No, nor no other living man ever did; all due respect, however. In the Middle States there is a bee belonging to the "Carpenter bee" tribe so nearly like a drone (*Apis*) that a novice of considerable experience might mistake it for a drone. They live a hermit's life, and feed their young on pollen.—G. W. DEMAREE.

I never saw a drone at work on bloom, or anything else for that matter. With their physical conformation, they cannot do it, for the reason that "they are not built that way."—J. E. POND, JR.

Prevention of Swarming.

Query, No. 334.—1. How would it be if I should put a queen-excluding honey-board on the bottom-board of each hive to prevent swarming before the season starts, and stand two cases of brood-frames on this, then another excluding honey-board on top of these, and confine the queen in these two cases, and then pile up cases on top of these as soon as necessary? 2. Will it keep the queen from swarming? 3. Is it advisable to do so if you want a good harvest and no increase?—F., New Jersey.

1. I would not like this method. 2. If the queen could not get out, it would keep *her* from swarming.—H. D. CUTTING.

It will keep the queens and the drones inside the brood-chamber. As to the result, you can better tell after trying. We should not like to do it.—DADANT & SON.

I think that there would be no advantage gained by the plan proposed. It is the bees which control the swarming-impulse more than the queen.—G. M. DOOLITTLE.

The best way to get an answer to this question would be to "try it on." If the queen is prevented from issuing, of course no swarming would take place; at least the bees would return if they did swarm out. I do not think such a plan would be advisable at all. I should fear that the bees would kill the queens after trying 2 or 3 times unsuccessfully to swarm.—J. E. POND, JR.

The bees would swarm, and finding no queen with them return, then a young queen would be reared and the old one generally destroyed, and if the young one could not leave, the colony would dwindle.—C. C. MILLER.

Of course it would prevent the bees from going off, although they might swarm out. I doubt if it would be desirable. If bees really get the swarming fever, they had better swarm and be done with it. Much room often keeps back the desire to swarm.—A. J. COOK.

Your plan probably might prevent the issuing of a fertilized laying queen with the swarm, and thus hold the swarm for a time in abeyance. But in many such cases the bees become angry at such perverse and obstinate queens and "ball" them to death, and then turn in and make queen-cells. The most of virgin queens could pass your honey-board with a swarm.—J. P. H. BROWN.

In one case where I tried a similar plan the bees reared cells and swarmed at the proper time. They came out twice and went back. A few days after a young queen was found dead in the excluder. I then removed it, and in about two weeks they swarmed, the old queen with clipped wing leading. 3. I do not think it the best plan to prevent increase.—G. L. TINKER.

The plan you mention will keep the queen from going with the swarm, but the bees will swarm just like they will when the queen's wing is clipped, and if the swarming impulse runs high, the old queen will be killed in her confinement, and the slender virgin queen will slip out through the perforation, and you will have lots of swarming, of the kind I most dread, *i. e.*, after-swarms.—G. W. DEMAREE.

It would act the same as an entrance-guard, keeping both queen and drones in the hive. The drones would die in the hive, the bees would swarm, and in time would probably kill the queen because she failed to follow them. To be a success there should be a drone-trap used in connection with the queen-excluder, and when the bees swarm some one must be in attendance to hive them and give them their queen.—W. Z. HUTCHINSON.

It would do first-rate, and you would be using one of the important functions of my new hive, and what I believe to be the best non-swarming arrangement yet devised; one which I have tested and wrote about, and you will find it described on page 104 of my book, where I briefly state the reasons of its superiority, and mention a drone and queen catcher used in conjunction with the device, and attached to the side of the hive.—JAMES HEDDON.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ○→ east; ←○ west; and this ♂ northeast; ↖○ northwest: ○↘ southeast; and ↙○ southwest of the center of the State mentioned.

For the American Bee Journal.

Conventions, Bee-Keepers' Rights, etc.

JAMES HEDDON.

My absence from the late convention of the North American Bee-Keepers' Society was as unavoidable as unexpected. Since reading the reports of that convention, I cannot but feel that it is possible for me to throw out a few hints that may tend to make our future gatherings more useful. Certainly it can do no harm to try, and in doing so let me assure the reader that improvement and advancement is my only aim.

I am of the opinion that Mr. W. F. Clarke is quite correct in his statement, that the North American Bee-Keepers' Society should be representative rather than local in its nature. I believe it would be a valuable change to have the members of this society elected representatives from State and local organizations. I believe it would be of more value if the meetings were more in the nature of business conventions, working for and representing the interests of subordinate societies, and bee-keepers in general.

Let me ask, is it not a mistake, after we have spent $10 to $50 to get to and from and attend these conventions, to have the dearly-bought time occupied by any kind of entertainment which we can get at home at our option, and for almost nothing. Among these things I may name essays which we can get through our valuable bee-periodicals, devoting our time to them when it does not cost us from $5 to $15 per day. I would devote this valuable time strictly to discussions of the knottiest questions and necessary business, and would avoid all the forms and ceremonies possible. I would copy after the shell-bark hickory-nut, which has a thin shell and thick meat.

As "leaders" for subjects for discussion, I would appoint persons to make extempore opening remarks. I agree with Mr. T. F. Bingham's expressed sentiments, that conventions are not proper places in which to read essays or make speeches framed to the pecuniary interest, or like damage of any individual, though I would not exclude a valuable fact or principle because it incidentally alluded to any person's interest or hobby. I would "hew to the line" of justice, truth and philosophy, "letting the chips fall where they might."

I have always felt a repulsion against the practice of making conventions a kind of fair for the exhibition of apiarian implements and supplies. I wish that the late convention had voted to entirely exclude the drowsy essay, which, when reported in our bee-papers, nearly always falls below the average contributions, and are, to me, far less interesting than reports of discussions.

I am glad to notice that the works of the United States Apicultural Station and Bee-Keepers' Union were brought before the convention. I am very glad that Dr. Riley induced our Government to substantially recognize our industry to the extent of establishing the Aurora Apicultural Station, with Mr. McLain in charge. While I have little knowledge of or interest in the questions of artificial fertilization, foul brood, etc., still I am aware that others have, and I have a deep interest in the question of the rights of apiarists in the community.

Mr. McLain's report regarding "Bees *vs.* Fruit," will prove of more value to our fraternity than all that the Station will cost us during a century. I wish that he had not said, near the close of his report, that perhaps there might be two or three days when bee-keepers should close their hives till grape-owners could gather cracked grapes. I am sure that such closing of hives is entirely impracticable.

THE BEE-KEEPERS' UNION.

As President of the Bee-Keepers' Union, a union formed for the defense of bee-keepers, when their natural rights are attacked, I wish here to state that so far as my influence may extend, I do not mean to stop short of exact justice—a justice that will give to bee-keepers, against all others, just what rights naturally belong to them. I believe that these rights will extend thus far, that an apiarist may keep bees anywhere he pleases, so long as they do not become a nuisance. Now, when are they a nuisance? My answer is, when, and only when, they are placed in such position that they will in defense of their homes, attack persons or animals, when such persons or animals are pursuing their legitimate course on the public highway, or lands not belonging to the bee-keeper.

When John Smith's bee sallies forth from John Smith's hive, with the intent to sting in defense of that hive, I hold that bee as John Smith's property, and hold John Smith accountable for its acts. But when such bee leaves its home to peacefully pursue its labors, it ceases to become Smith's property, and Smith cannot collect damages of Brown if Brown kills that bee, so neither can Brown hold Smith responsible if Brown pinches the bee and the bee stings him, or if the bee goes into his kitchen after preserves, falls into his well-bucket or specks the clothes on the line. If Smith cannot hold Brown accountable for the destruction of that bee, by what right can Brown hold Smith accountable for the acts of that bee, after it has left its home and become public property, the same as bees in the woods.

Bees in nature, in hollow trees, whose whereabouts are unknown, may get into the preserves, water-pail, or speck the clothes, and will sting if pinched; but what can the law do about it? If, however, these bees should sting in defense of their homes, that home will be discovered at once, become the property of the discoverer, if he wishes to claim it, in which case he will become responsible for letting them remain where they will sting legitimate travelers, in defense of their homes.

It seems to me that bee-keepers must recognize the fact that our industry must either be legitimate or illegal, and if legitimate, no law must exist that will admit of compelling us to move our apiaries whenever a neighbor may see fit to hang out some clothes.

For 13 years I kept a large apiary in the thickly settled part of our city, and never heard of their specking clothes but once; and though our own clothes-line was less than a rod from the apiary fence, our clothes were never specked; but only a few weeks ago a farmer living one-fourth of a mile from my apiary, told me my bees were badly specking the clothes on the line, while they were flying over to a buckwheat field. Now, where shall we be allowed to keep bees? I answer, any place where they will not sting legitimate passers-by in defense of their homes. The line must be drawn here, or petty courts will be drawing it in as many different places as the number of cases that come up.

PRIORITY OF LOCATION.

Only a few months ago I wrote on the subject of "Priority-right of Location," trying to show why the prior occupant had a natural exclusive right—why such exclusive possession would result in the greatest good to the greatest number, and at the same time I declared my belief that the laws of nature would cause that condition of affairs to prevail, on the principle of "the survival of the fittest;" and I tried to show each reader how to "fit" himself to "survive." Surely, none have forgotten how malignantly my position was attacked mainly by those who had personal hatred, and who knew little of practical honey-producing. Now imagine my surprise at noting that at the Indianapolis convention a committee was appointed to inquire into the desirability and feasibility of asking our Government to legislate this condition of affairs.

I believe the "survival of the fittest" plan is the better and only practical plan—the only one the Government will sanction—the only one in harmony with common law, and a sure cure for the trouble. We are now "governed too much" by legislation. Many of our laws are dead letters. I look upon it as a great mistake the moment we see something wrong, or conceive of an improvement in human affairs, to at once call for legislation.

Dowagiac, 9 Mich.

For the American Bee Journal.

Uniform Temperature in Hives.

W. F. SMITH.

In the answer to Query, No. 310, J. E. Pond says that "a large colony well protected from the winds, with some absorbent on the top of the frames that will allow moisture to pass off and the heat be retained," is the way by which practical uniformity of temperature can be maintained within a hive when wintering bees on the summer stands. The hive that I mention on page 570 embraces this as one of the prominent requisites, as it is so constructed that it combines the uniform bee-temperature of 12 colonies, with wool cushions on the top of each colony, so arranged that it carries away all the moisture and yet retains the heat, thus keeping the bees dry and warm.

Dr. J. P. H. Brown also says that with judicious and proper packing it can be maintained. The only judicious and proper packing, I believe, that can be found, is packing bees with bees. This I have also arranged so that each colony has bees on three sides, and packed on the fourth with wool, so that the extreme cold and sudden changes of weather can have no more effect upon them than it would upon a colony as large as 12 ordinary ones.

It is a well-known fact that the laying capacity of one queen cannot extend a single colony to the dimensions required to keep up a sufficient uniform heat to protect it from the cold and changes of weather in our severe winters; therefore, we must resort to the combination of colonies in order to obtain that uniform temperature. This has been my theory for the last twelve years, and for the last four years I have been trying to construct a hive on this theory, in which bees could be wintered with certainty and safety; and with two years' test it proves to be a success.

I am satisfied that it is useless for bee-keepers to struggle any longer with bee-houses, cellars, caves, clamps, single and double-walled hives, chaff or sawdust packing, or any other method that has for its object the protection of a single colony. We all know that a large percentage in these die every winter. The very largest colony that possibly can be obtained from one queen cannot be relied upon to pass through a severe winter with any degree of certainty, with any of the above methods. While the combination of colonies in my hive secures a uniform and proper degree of temperature to protect them with certainty, both in winter and spring, it also induces early breeding, prevents spring dwindling, and pushes them forward ready for the first honey yield. They can be examined at any time, and their condition ascertained without the slightest disturbance or danger.

The labor in transferring them in the fall is much less than packing them in single hives, or moving in cellars or houses, and it affords an opportunity to ascertain the true condition of each colony as they are put up for winter. It requires one-third less stores, and the mortality of bees is 50 per cent. less than that of single colonies; and I believe, from the two years' test, that the liability to diarrhea is entirely overcome by the constant removal of the moisture and exclusion of cold. I have 30 colonies now ready to put into these hives for the coming winter. I intend to make a model of the hive this winter and send it for the BEE JOURNAL Museum.

Dutton, Ont.

For the American Bee Journal.

My Experience with Foul Brood.

RANDOLPH GRADEN.

On page 601 Mr. Hoyle gives some facts, and intends to prove that foul brood is not contagious in a manner generally supposed; also that it cannot be cured by drugs or starvation; but claims that it is in the bad honey or honey-dew alone. If what little experience I have had with foul brood (if such it is, and I believe it is, as it is just as described in the bee-papers and books), then I differ from Mr. H. in some respects. If the disease is not contagious, and it is in the honey alone, why does not the disease appear all through the hive at the same time? for, surely, if the honey or food is injurious to any part of the larvæ, it must be to all parts all through the hive or brood, and it would all become diseased at once, and in all colonies that worked on the same kind of forage.

I have seen the disease appear during the best of white clover and linden honey flows this season. It first appeared in the colonies having the oldest or darkest brood-combs; and while those first colonies became badly affected, the odor could be smelt for rods away; while swarms that had been hived at the beginning of the honey-flow, on foundation, on hives only a few feet from the diseased colonies, were increasing in bees and also storing honey rapidly.

If honey-dew or bad honey was the only cause, those colonies would, no doubt, have all become diseased at about the same time. But I noticed that colonies, upon close inspection, were from all appearances clear of the disease, while in a few days afterwards it was found to contain a few cells of brood with the capping sunken and wrinkled in a space of about 1 or 2 inches in circumference; and upon opening their hive the young bees or larvæ were found dead and quite black. On leaving the colonies a few days longer it was found that the brood-comb containing the first affected brood was one-fourth or more affected, and also the brood directly across from the first appearance, and also the brood just back of the affected brood would show the symptoms of the disease, and so on until the bees are obliged to remove the honey from the outside frames, and there the last brood is hatched. At that time the colony will be a mere wreck, and an unbearable stench will come from the hives. The brood or larvæ will be a putrid mass, so that if a pin-head is inserted it can be pulled out of the cell like a stringy, mattery substance.

I do not claim to know what the real cause of the disease is, but from what I have seen I think that the real cause is yet to be discovered. That it is incurable by drugs I am as yet unable to say, but according to Mr. McLain's statement on page 584, it appears to be, or Mr. McLain must have made a sad mistake. I am treating mine in the following manner; whether the case will be permanent or not, I am at this date unable to say:

First I take the frames containing the foul brood, and with a sharpened and curved piece of tin for the purpose, I shave the cappings off and then dust thickly with powdered coffee, and about every second or third evening I roll a piece of paper in a funnel shape, and put in some thyme (put it into the smoker), and ignite and blow a few puffs of smoke in at the entrance, when in a few days the odor will not be very strong. I then make a syrup of sugar and soft water, adding a few drops of carbolic acid or phenol to each pint of syrup. I now find the frames of the diseased brood to be somewhat shrunken and dried. I then sprinkle or swab the combs well, and also feed some of the syrup.

I have just examined 2 colonies thus treated, that three weeks ago had patches of foul brood the size of an ordinary tea-cup at the top, and in one colony I found no foul brood, but found the cells filled with honey and some of it capped, and in the others I found only one cell containing any foul matter, and most of the cells contained honey. I have just mixed some of Mr. McLain's preparation to try on some of the diseased colonies.

Taylor Centre, Mich.

For the American Bee Journal.

My Report—Honey Exhibits at Fairs.

A. M. GANDER.

The spring opened early after a moderate winter, and bees came through in good condition, except 2 or 3 colonies which were weak, but there was plenty of pollen and some honey to be had right along from the time warm weather began. There was soon plenty of brood and young bees to spare from the stronger colonies, and by the time the honey harvest was here all were ready for the supers.

This is the way I strengthened my weak colonies: Instead of putting a comb of brood (taken from a strong colony) in for them to care for, I shook a lot of young bees before the hive and let them run in, the old bees taking wing and returning to their hive; by so doing there is no brood lost by the bees not being able to protect it, as the young bees are taken from colonies that are crowded and have plenty of bees to spare; the stronger one will not be injured, but benefited by being relieved of the crowd of young bees (or a part of them) that are not yet needed for the honey harvest, and their place will be filled in a day or two by bees that are constantly hatching from the solid sheets of brood. The queen in the weaker colony is now given a chance to lay to her full capacity (which she could not do before, for lack of bees to protect and care for the eggs and brood), and this colony soon becomes as strong as any. Young bees may be taken from several colonies, and the weak one made as populous at once as any in the yard. If a comb or two of hatching brood is put in at the same time, all the better, as there are now bees enough to protect it.

Having the colonies all in good strength, and the honey season being an average one, I secured a fair crop for this section. The yield from clover was moderate, but from basswood it was light. The bees have gathered more fall honey this season than in any season for three years. As the result of the season's work I have 4,150 pounds of nice honey, 1,250 pounds being splendid comb honey, and 2,900 pounds being extracted. I took that amount from 47 colonies in the spring, and increased my apiary to 62 colonies to begin the winter with. All have enough honey to winter on. I am getting 10 cents for clover and basswood extracted honey in 5 and 10 pound lots. I sell the extracted honey to consumers.

Having a fine lot of honey, and wishing to dispose of it to consumers as much as possible, as is my custom, I made exhibits at Fairs this fall as a means of advertising, by bringing the product directly before the masses of people that usually attend the Fairs. This I did pretty well, as I had the largest exhibit at each of the three Fairs that I attended. For the Tri-State Fair at Toledo, Ohio, I put up an exhibit that brought out many expressions on the nice appearance of the honey, the exquisite whiteness of the comb honey, and the clearness of the extracted. What rendered it still more attractive, was the neat appearance of the packages, and the tasty and attractive way in which they were arranged all combined to make it pleasing to the eye. Some would go farther than to feast their eyes on the attractiveness of the display, by purchasing a package to tickle their palate and treat the inner man with a good, wholesome, and delicious sweet. At this Fair my exhibit was awarded the first premium for the most attractive display of comb honey; for the most attractive display of extracted; best 10 pounds of comb honey, in best shape for shipping and retailing; best 10 pounds of extracted honey, and manner of putting it up for market considered; honey-extractor.

Returning from the Fair at Toledo, I prepared for and made an exhibit at our County Fair held at Adrian, that entirely eclipsed that made at Toledo, both in magnitude and splendor, which again brought forth many expressions in praise of the display, many saying that it was the best and most attractive display at the Fair, mainly because it was something new and different from what they are used to seeing at Fairs.

The total amount of the premiums offered in the bee and honey department was $42.50, the most of which was taken up, there being but three exhibitors; there were not entries enough made to take up the whole list. Still we did well for a County Fair.

The next week found me at Morenci, Mich., putting up an exhibit there, which many said was the best of any exhibit at the Fair. Here the premiums offered were so small that it was scarcely any inducement to put up a display, but the display was made any way, and did me good service by way of advertising. Had I not exhibited honey at this Fair last year and this, the bee-keeping interest would not have been represented, and the opportunity of showing the products of the honey-bee lost.

Summing up the whole matter of attending and making exhibits at Fairs, I feel richly repaid for the effort required, as the money received by way of premiums paid all expenses; also fair wages for the time spent. Some honey was sold where it would not otherwise have been sold. Then there is the advantage gained by way of advertising, which is no small matter where a bee-keeper has a crop of honey to dispose of, and relies upon the people in his vicinity to consume it, thus laying the foundation for a permanent market at home. Add to the above the opportunity of meeting the many friends and acquaintances that attend the Fairs, I can say that I have had a good time, both for pleasure and profit. I do not wish any to think that mine was the only exhibit worth looking at, for, although I had the largest and seemingly best display, there were other exhibits that needed looking at as well as mine. Nor do I wish any to think that I want to take too much praise on myself for putting up a display. Where one has the material to make a display of, it comes to one natural enough to arrange it properly.

Adrian, Mich.

For the American Bee Journal.

Nitrogen, the Elements of Fat, etc.

SAMUEL CUSHMAN.

On page 651 Prof. A. J. Cook says: "Mr. Samuel Cushman, on page 671, states that I say that nitrogen may be transformed into fat. He quite misunderstood me. There is no nitrogen in fat, nor is there any carbon, hydrogen or oxygen (the elements of fat) in nitrogen. Hence any such statement would be perfectly absurd."

As the above is an answer to my question, I suppose there is no call for anything from me; but lest any one should think that I have done the Professor injustice by such a statement, I quote the following from his essay on "The Pollen Theory," on page 25: "In some cases, as in fatty degeneration of the heart, almost pure muscle is *transformed into fat.*" Does Prof. Cook deny that muscle is composed, the greater part of it, of nitrogen?

In another place he says: "Again, when animals hibernate, or when they are long sick and take no food, the stored fat can, for a time, serve the purpose of all food." Then (he reasons) all organic food may under the best conditions be converted into fat. *All organic food* means so much albumen or nitrogen, and mineral salts, etc., as well as carbon—the fat and heat producer. This, he claims, can all be converted into fat. So much for my statement.

On page 26, he says: "We have seen that stored fat, in animals that hibernate, and in case of disease, will alone serve to keep up nitrogen." I question the truth of the statement that "stored fat will alone" serve to keep up the nitrogen, or for a time serve the purpose of *all food.*

Is it not well known that the nerves, muscles, and blood are all used and wasted in such a case as well as fat? Of course when we are deprived of food, fat wastes the most rapidly, and it naturally would, as our daily food requires the greater proportion of those elements that may make fat, but the other elements are as surely wasted, although in a limited quantity.

Pawtucket, R. I.

For the American Bee Journal.

Are Bees Property?

C. L. SWEET.

Mr. Camm's article on page 454 contains some peculiar ideas about political economy and bee taxation. Mr. Camm says that if his bees were taxed he would "howl," and that he went into the bee-business to enjoy his natural rights. I live in the same State in which Mr. Camm does, and have paid taxes on my apiary for more than twenty years. It was assessed for the first time by myself.

The revenue law of Illinois enumerates certain kinds of property that is taxable, such as horses, cattle, mules, etc., 36 questions, and then says, all other property. In another section it mentions by name particularly the kinds of property that are exempt. Now I reasoned in this way: If an apiary is property it is not exempt from taxation in Illinois. If any person should attempt to carry mine away without consulting me about so doing, I should be very apt to claim that bees were property. So they were assessed.

With my present understanding of this question, if I was the assessor in the township where Mr. Camm has his apiary, I should assess it, and then let him "howl" and fall back on his natural rights, etc. Neither would he be allowed to whine out on account of the keeping of bees being a new business. There have been some valuable inventions made in recent years, but that does not make the business new, any more than the invention of the last patent-churn makes the keeping of cows a new business. Besides, is it not better policy for bee-keepers to claim that the business is old for another reason? A bee is a commoner in the fields and forests, and has been for thousands of years. It has the right of way there. In Illinois if a wagon-road has been traveled even for twenty years, it is a road.

By what rule would Mr. Camm and that fast-increasing number of people about whom he tells us, value the land only for the purposes of taxation, and not take into consideration the products of labor or improvements on such land made by labor? Would he tax a quarter section in Chicago, covered with buildings,some of which are twelve stories high, the same as he would a quarter section of barren sand-hills? So the fertility of the land would not figure, as it would require labor to harvest the crop. Without labor a quarter section containing a gold mine would be of no more value than the sand-hills. So it appears that if the land only was taxed there might be some difficulty in fixing the right amount on each tract according to Mr. C's proposed plan. I suppose this army of non-tax-payers will expect to do the most of the voting, especially when questions of taxation are being considered—building school-houses, etc.

Glenwood, ♂ Ills.

For the American Bee Journal.

The Stark County, O., Convention.

The bee-keepers of Stark and adjoining counties met in Grange Hall, at Canton, O., on Oct. 26, 1886. Mr. Oswalt, the President, on taking the chair, said that the society ought to instruct the committee appointed for that purpose, to get all the concessions that is possible in the way of a suitable building for exhibits, and increase in premiums, from the directors of the Agricultural Society. Dr. G. L. Tinker thought that the premiums were so small, usually, that it was no inducement for bee-keepers to make exhibits, and also that the judges on such exhibits were usually incompetent.

Mr. Oswalt said that honey was classified with pies, cakes, jams and jellies, which should not be the case, but that a separate room or building should be provided for the purpose.

Dr. G. L. Tinker, of New Philadelphia, then read the following essay on

FOUL BROOD.

The disease of the larval brood of bees is yet wanting a scientific name. Mr. Frank Cheshire, of England, who is an expert microscopist, has investigated it and given a scientific name—*bacillus alvei*. But this germ, if we are to judge by Mr. Cheshire's description of it, is not the germ that is the cause of true foul brood. He says that *bacillus alvei* is not conveyed in the honey from one colony to another, when all who have had experience with it unite in saying that honey from a foul broody colony will convey the disease promptly and surely. Mr. Cheshire also states that *bacillus alvei* may exist in the blood and ovaries of queens, and that in many cases the disease cannot be eradicated permanently without superseding such queens.

But the history of the disease has shown that every case, however virulent, may be cured by Mr. D. A. Jones' starvation plan, which consists in driving the bees into a box and confining them for 48 hours, or until all the honey in their honey-sacs is consumed; then hiving the bees in new hives on foundation. If all cases of foul brood can be cured by this plan, as is alleged, it would appear that the true germs of foul brood do not enter the blood of the bees or exist in the ovaries of the queens; since, if such were the fact the starvation cure must fail to eradicate the germs in so short a time. We may conclude then that the true nature of foul brood has not been ascertained, and that we shall have to wait awhile yet for a scientific name.

That it is a germ disease, however, there is every evidence, as much so as in all the more contagious and dangerous maladies affecting humanity, that are now believed to be of undoubted germ origin.

I have never seen a case of foul brood, but it is described as producing quite uniform symptoms and effects. The larvæ are usually sealed up by the bees before death occurs, after which a very foul odor arises from the combs and hives. The capping of the cells becomes perforated, leaving a small pin-hole opening that seems to be a characteristic symptom. Both healthy and diseased brood may be found on the same combs, but in many cases there will be found little healthy brood left; the result being that the colony steadily dwindles until it is robbed out by other bees of the neighborhood. Then it is that the disease is spread broad-cast, and if not checked by active interference, it will ruin the prospects of every bee-keeper in its range.

But the robbing of an affected colony by healthy bees is only one way by which the contagion is conveyed. Foul brood may be conveyed in many ways, by careless bee-keepers indirectly to healthy colonies. The invisible germs may attach themselves to the hands, the clothing, and to utensils, and thus be carried long distances. A very common means of transmission is by means of the extracted honey sold from apiaries having affected colonies. If a single drop of such honey is exposed, and taken by healthy bees it will convey the deadly venom with unerring precision.

The treatment recommended is varied, for success has attended a number of plans of treatment, while in some cases it has seemed to die out for a time only to break out anew, and usually with greater virulence at another time. Burning the colonies with fire where the disease is early discovered, has many times stamped it out speedily, and in some cases it may be still advisable to use fire, where the owner of the colonies is unable at once to attend to them. Treatment of some kind is imperative, and the greatest care is required to prevent any attempt at robbing by keeping all sweets out of the reach of the bees.

The starvation cure is reliable, and I believe that Prof. N. W. McLain's treatment lately given in all of the bee-periodicals is also reliable. But it is entirely useless to attempt a cure by a hap-hazard or incomplete course. The treatment must be thorough so that every germ is destroyed. There have been cases where treatment has been attempted (but ignorantly or imperfectly carried out), that the owner has abandoned his bees to their fate, leaving the evil to spread to all the other bees within reach. Fortunately we have very few such men, and I dare say none in our midst who would not make every effort to eradicate the disease. But special laws have been enacted in several States to compel the indifferent and refractory to do their duty. Heretofore we have had very few cases of the malady in Ohio, and no legislation has been necessary, and I shall hope that there will not arise an occasion in which an appeal to the law will ever be necessary.

Bee-keepers' associations are of great benefit and advantage to the apicultural industry, and if ever we shall be so unfortunate as to find foul brood in our midst, the wise counsel and action of this association may become indispensable in successfully dealing with it.

After a general discusssion of the above subject, the reports were called for. Dr. Tinker reported 42 colonies, spring count, and some of them weak. He had disposed of 9, leaving 33, 4 of which were weak. From these 29 colonies he secured 2,000 pounds of nice white comb honey, and 200 pounds of extracted, and increased them to 76,some of which were nuclei.

Dr. Fox, of Sandyville, commenced the spring with 1 colony, increased it to 5 by natural swarming, and obtained 124 pounds of honey.

A. J. Rohn had 4 colonies, spring count, increased them to 9, and obtained about 100 pounds of honey; left 80 or 100 pounds on the hives besides.

Jacob Oswalt commenced with 20 colonies in good condition last spring, increased them to 35, and took 1,000 pounds of surplus.

Myers Sweaney commenced the season with 9 good colonies in prime condition, and increased to 32, besides taking 1,034 pounds of comb honey, and thought he would take enough more to increase the amount to 1,050 pounds. One colony that did not swarm produced 211 pounds of comb honey.

J. H. Smith commenced the spring with 4 colonies, some of which were weak. He now has 9, and obtained 150 pounds of comb honey as a surplus, which, with 38 or 40 pounds left on one hive, will increase his report to that extent.

J. A. Taber reported 31 colonies in the spring. He disposed of 9, and used 3 colonies for queen-rearing; from the remainder he took 1,500 pounds of comb honey, and had 18 swarms. One swarm that came off in the afternoon he placed on the scales, and found that it gathered 10½ pounds the first day, and averaged 7 pounds per day for the first four days after being hived.

Jon. M. Mowl had 5 colonies, spring count, increased them to 12, and took 450 to 460 pounds of surplus comb honey. One colony that did not swarm produced 110 pounds of surplus.

Mark Thomson commenced the season with 6 colonies, increased by natural swarming to 13, bought 7 colonies, and obtained nearly 400 pounds of comb honey.

After the reports were all given, a general discussion of the best way to fasten foundation into sections and frames followed. Dr. Tinker said that the best plan he had ever used was to take pure beeswax heated over a spirit lamp, place the starter or sheet of foundation in position, and with a camel's-hair brush run the wax along where the foundation came in contact with the top-bar.

The convention then adjourned to meet on the second Tuesday in April, 1887. MARK THOMSON, *Sec.*

For the American Bee Journal.

Exhibit at the Western Fair.

W. H. WESTON.

The exhibit of bees, honey, and apiarian supplies at the Western Fair which has just been held in London, Ont., has far surpassed all previous efforts. Nearly 10,000 pounds of honey, both comb and extracted, was on exhibition, and went far to show the visitors that the honey-industry is rapidly on the increase. The county of Middlesex contributed nearly all the honey shown. The amount of honey which is annually gathered in this county must be enormous when it is known that the bees of five of the exhibitors gathered over 22,000 pounds of honey during the past season, which has been a very unfavorable one for honey-gathering. Mr. J. B. Aches, of Poplar Hill, secured more than half of the above amount.

The exhibitors from this county were Messrs. Jno. Rudd, of London; R. H. Smith, of Ealing; J. B. Whealy, of Lakeside; Wm. Coleman, of Devizes; all of whom made very tasty displays. Mrs. Rudd had a large trade in supplying visitors with samples of honey, charging each person 5 cents, and allowing them to eat all they wanted. One would think by the mass of bee-literature that is constantly being circulated through the country, that nearly everybody would know the difference between extracted and strained honey; but just stand in the honey hall for one day of the Fair, and you can meet thousands who do not know what a honey-extractor is, and are about on a par with one of the judges at the Provincial Exhibition, which has been held at Guelph, who said that there was no difference between a wax-extractor and a honey-extractor.

Messrs. E. L. Goold & Co., of Ontario, made a very fine show of apiarian supplies. Mr. Holterman had charge of the exhibit. They have been fortunate enough to secure 25 prizes at Toronto, Guelph, and London.

Mr. F. H. Macpherson, representing the D. A. Jones Company, showed the largest amount of apiarian supplies, and the hundred and one things needed (and not needed) about an apiary, could be seen in this exhibition.

At the last session of the Ontario legislature an amendment to the agriculture and arts act was passed, incorporating the Ontario Bee-Keepers' Society, which places it on the same footing with the Dairymans' and Fruit-Growers' Associations, and will be the means of advancing this industry to a very great extent. The society receives annually a grant of $500. This year the grant is used by the society, as well as a special grant of $1,000, for the purpose of opening up a market in England, for the surplus stock of honey, by making an exhibit at the Indian and Colonial Exhibition, now being held in London, England.

London, Ont.

For the American Bee Journal.

Southern Illinois Convention.

The Southern Illinois Bee-Keepers' Association met in the Court House at Benton, Ills., on Oct. 21, 1886, and was called to order by the President, Wm. Hutchinson.

The President gave a talk on the advantages and benefits of the association. the scores of publications on the subject of "apiculture," and how well informed we ought to be in theory. He said that conventions would help us to put these theories into practice, by giving our experience in the business and the result.

Mr. Thos. C. Stanley spoke of "apiculture as a business." He has been successful in the pursuit, and has made a better living for himself and family in the bee-business than in anything else that he had ever tried. The qualifications for bee-keepers are vigilance, energy and industry, or a mind to stick to the business for the pleasure and profit there is in it.

Mr. C. M. Dixon then gave his experience with the different races of bees. The Italians were conceded to be the best. He gave a short talk on the use of foundation, saying that he could not do without its use. He also gave a plan for a sun wax-extractor made out of a Simplicity hive, with a tin reflector and tin pans with tin screen.

The constitution was then read, and signed by several. Mr. Hutchinson read an essay from the BEE JOURNAL. Mr. Dixon gave his experience in getting 146 sections of honey from one colony from the fall honey flow.

The election of officers resulted as follows: President, C. M. Dixon; Vice-Presidens, F. M. Atwood, W. R. Silkwood, and Thos. C. Stanley; Secretary, F. H. Kennedy. It was decided that we meet next spring in Benton, Ills., at the call of the committee. F. H. KENNEDY, *Sec.*

For the American Bee Journal.

Pan-Handle Bee-Keepers' Convention.

In response to a call, a number of bee-keepers of Ohio and West Virginia met at Wheeling, W. Va., at 10 a.m., Oct. 13, 1886, for the purpose of organizing. The meeting was called to order by Henry Leweday, of Wheeling, upon whose motion Mr. H. N. White, of Martin's Ferry, was called to the chair, and W. L. Kinsey was appointed Secretary.

Representatives from the counties of Hancock, Brook, Ohio and Marshall, W. Va., and Jefferson, Belmont, Morrow and Harrison counties, Ohio, were in attendance. The morning session was taken up in discussing preliminary business, and at 12 o'clock the meeting adjourned until 1:30 p.m., at which time it was decided to name the association the "Pan-Handle Bee-Keepers' Association."

Permanent officers were then elected as follows: President, Henry Leweday, of Wheeling; Vice-President, L. C. Seabright, of Blaine, O.; Secretary, W. L. Kinsey, of Blane, and Treasurer, August Goetze, of Wheeling.

The programme consisted of the following: Mr. Henry Leweday read a report from the *Bee-Keepers' Guide*; Mr. August Goetze gave his experience of two years in bee-culture; L. C. Seabright, on fall treatment; Mr. Fred Mehleman, his experience in wintering bees; Mr. W. L. Kinsey, description of locust honey; Mr. H. N. White, on wintering bees and the coming hive; Mr. Thorborn, on cellar wintering of bees.

The convention then adjourned until the first Thursday in March, 1887. W. L. KINSEY, *Sec.*

Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year? When you do so, please select any 25 cent book in our list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887,—will you not assist us to obtain them?

Local Convention Directory.

1886. *Time and place of Meeting.*

Nov. 24, 25.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Wintering Bees in Clamps.—Jno. W. Walker, Welcome, Ont., on Oct. 30, 1886, says:

Bees have not done extra well this year in this locality. They swarmed themselves weak. I had 18 strong colonies last spring; now I have 50. I have taken 1,500 pounds of honey in pound sections, besides quite a quantity of extracted honey. I do not place the hives close together. Each one weighs now between 50 and 100 pounds. I winter my bees in a clamp packed in straw and chaff with the front facing the south, so when the sun comes out strong it warms the hives. I lost one colony last winter, and that through carelessness in the spring by not having proper ventilation.

Honey-Flow Stopped by Drouth.—F. H. Kennedy, Duquoin,♀ Ills., on Oct. 30, 1886, says:

This has been rather a bad year for honey in this locality. The drouth stopped the honey flow in the fall. I had a few colonies that yielded over 100 pounds apiece. While at the convention at Benton, Ills., I visited the apiary of Mr. C. M. Dixon, of Parrish, Ills., who obtained 146 sections from one colony of bees from the fall honey flow.

Bee-Keeping in Texas.—W. S. Douglass, Lexington,⊙ Tex., writes:

I commenced last spring with 32 colonies, all in good condition. Wild peach opened, but it yielded very little honey. Willow yielded some honey, but on account of incessant rains, bees got very little from it. They began to get short of stores, yet the hives were full of brood from top to bottom. I began to think of feeding, but suddenly bloom came and I never saw such a rush. The entrances were clogged with bees coming and going both early and late. This continued for six days, when it began to rain, yet between showers the bees still worked hard. Swarms began to come out then, and I got 7 swarms during rattan bloom. Other wild flowers bloomed, but the bees got no surplus from them. Smartweed, or wild tobacco, as it is generally called, came about the same time, and bees began to gather surplus; yet, before these were half through yielding, morning-glory came, and it being more plentiful, and nearer the apiary, bees neglected everything for it. Then the hives were soon full of as nice honey as I ever saw. This is a splendid honey-plant, yielding for about 25 days. Farmers of the South are acquainted with this vine, as it grows on almost every farm. I have seen it all over corn and cotton, entirely hiding both from view. I have seen bees gather full loads from it in less than a half minute. Bees are working on scattering flowers now, and are getting some honey. I am testing Italian bees. I have 2 colonies of them.

Bees did Well.—E. Pickup, Limerick,♂ Ills., on Oct. 29, 1886, writes:

On page 243 it is shown a debt of $100 was paid with $5. I passed Mr. Brown's note of $70 to Mr. Jones; he passed it to Cone & Co., and they passed it back to Brown, making $210 paid without any money. The bees will soon be taking their winter's nap. They did well in June and the first week in September. I like to read the Bee Journal during the long winter evenings, so as to keep posted. I offered the county agent of the American Bible Society 1,000 pounds of honey as an "endowment" fund, and it was accepted. I weighed it this evening to deliver to-morrow.

Counting Comb Surface.—H. J. Northrup, Lansingburg,○+N. Y., says:

In the answers to Query, No. 324, do the writers count both sides of the comb? For instance: G. W. Demaree says that the ten frame Langstroth hive has a comb surface of at least 1,440 square inches. J. E. Pond, Jr., says that a Langstroth size comb contains about a square foot of cells on each side, which according to my reckoning would double Mr. Demaree's figures. Who is right? I would like to know how to count comb surface, whether one side or both.

Good Crop—Dog Killed by Bees.—J. M. Clark, Hillsdale,♀ Mich., on Oct. 30, 1886, says:

I packed 11 colonies in chaff last fall, and had the same number in fine condition to commence the season with last spring. They built up rapidly on fruit-bloom, and were in fine condition for white clover, of which we had a good crop. The basswood yield was less than one-fourth of what it was last year, but the fall crop was large and good. My 11 colonies increased to 23, by dividing, with a few natural swarms, most of which my wife hived, as I was away from home. My crop of honey is 1,600 pounds, mostly extracted, after leaving from 25 to 30 pounds for winter stores to each colony. I weighed my colonies, hives, honey-bees and all, and then deducted the weight of the empty hive and combs, allowing about 3 pounds for bees. All are now ready to pack for winter, and I hope to greet them in health and vigor next spring. I find a home market for my honey at 10 cents per pound. A very singular case of a dog being killed by bees, occurred in a neighboring town. She was a fine blooded dog with puppies, and was tied to a stake in the yard while the pups were playing in an adjoining yard where there was 5 colonies of bees. They in some way disturbed the bees and ran with the bees after them to the mother, when the bees turned their attention to her, and stung her so badly that she died in less than 20 minutes. The puppies escaped. The dog was valued at $50, but there is no prospect of a lawsuit growing out of it.

Exhibit at the St. Louis Fair.—Louis Werner, Edwardsville,♀ Ills., on Oct. 29, 1886, says:

There was a large and fine display of honey, bees, and apiarian supplies at the great St. Louis Fair, held at St. Louis, Mo., on Oct. 4, 1886. The money premiums offered in the bee and honey department amounted to nearly $150; also diplomas were presented. Among those who secured valuable premiums for making excellent exhibits, were Messrs. S. D. and E. S. Armstrong, of Jerseyville, Ills.; Dr. Geo. Liebrock & Son, of Mascoutah, Ills.; Jos. Swallow, of St. Louis, and myself.

Good Results.—Wm. Ford, Marshalltown,⊙ Iowa, on Nov. 1, 1886, writes:

I commenced in the spring with 10 colonies—8 strong ones and 2 weak—and increased them to 24 strong colonies, besides taking 700 pounds of honey, 365 pounds being extracted, and 335 pounds comb honey. I hived 3 swarms, 2 on June 7, and 1 on June 9. They were hived on frames with just starters in them. They built 20 Langstroth frames full of comb, and stored 122 pounds of extracted honey apiece, and 28 pounds in the brood frames in just four weeks from the time they were hived. My bees are all in good condition now for winter, and have from 25 to 50 pounds of good white clover honey in each of their brood-chambers for winter stores. My bees averaged 70 pounds of honey per colony, spring count.

Caucasian Bees.—R. F. Holtermann, Brantford, Ont., writes:

Mr. J. B. Hall, of Ontario, has for some time experimented with the Caucasian bees, and kindly gave me some of the results of his observations They are very docile and even quieter than the Carniolans; the hive can be jarred with impunity. They are very small, with three small, dark, yellow bands heavily coated with light down. The drones are darker than black drones, and heavily coated with fur, each segment having a small line of bright golden color. When the swarming impulse seizes them, they start 100 to 150 queen-cells. The queens, as they mature, keep cutting their way out of the cells for a week, the young queens and bees not destroying the cells or queens matured. When they swarm they mean it, and will not return to the old stand. They produce beautiful comb honey, but not much of it. They are the best wintering bees, as long as they are given honey from other colonies to live on. When pure or crossed with the Italians, they do not breed fast. The queen does not deposit eggs in a compact solid sheet. The queen is slim, and perforated metal will not confine her in any part of the hive. It will be seen from the above that after careful experimenting by Mr. Hall, he found that they were not the bees likely to be of great value to the practical apiarist.

A Lady Bee-Keeper's Report.—Mrs. E. A. Cooley, Galesburg, Ills., on Oct. 14, 1886, says:

I commenced bee-keeping in the spring of 1884, but lost nearly all of my bees the following winter on the summer stands. During the summer of 1885 I took as good care of what were left (5 weak colonies) as I knew how; built them up to 11, though 3 were little more than nuclei. I wintered them in the cellar, and this summer I have taken off 1,300 pounds of comb honey, the best colonies giving 150 pounds each. I worked alone with them until this summer my husband began to help me in the honey-harvest, and is now preparing the bees for winter.

"Wavy" Combs.—W. Z. Hutchinson, Rogersville, Mich., writes:

I was much interested in the article of Mr. Stiles, on "Foundation in the Brood-Chamber." I consider this an important subject. If we can dispense with foundation in the brood-chamber, and secure better results it is quite a step. *I* have succeeded in doing this for the past four years; and I am willing to do all I can to enable others to succeed. Mr. Mitchell, Mrs. Chaddock and others have trouble by the bees building too much drone comb. I think that I have explained why they have so much trouble from this source; although it is, of course, possible that I have overlooked some element of my success. Some bee-keepers have succeeded equally as well as myself. Mr. Stiles now complains of something that has, I believe, not given any trouble to others; viz., crooked or "wavy" combs. This is something that has given me no trouble; my combs have always been so straight and true that it would be difficult, without examining closely, to tell whether they were natural combs or built from foundation. I cannot understand why Mr. Stiles has the trouble that he reports, especially when the brood-nest is small, and the frames all supplied with starters. Mr. S. says that "last year more careful experiments were made, wherein several new features were developed." I hope he will yet learn how to secure straight combs.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00;** or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

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System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

Convention Notices.

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 18, 19 and 20, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised. An unusually brilliant programme will be prepared and announced later.

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Nov. 24 and 25, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

◆

Another Union Convention is to be held in Albany, N. Y., next January. See the above notice of it. Let there be a general rally of the bee-keeepers of New York at this union meeting.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Receipts are liberal and prices vary from 10@13c. per lb. for white in sections varying from 1 to 1¼ and 1½ lbs. Many sales of good white 1-lb. sections are made at 11c. Extracted is quiet and ranging from 5@7c.

BEESWAX.—23@25c. R. A. BURNETT,
Oct. 13. 161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

MCCAUL & HILDRETH BROS.,
34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Best white in 1-lb. sections, 12@13c.; dark, 10@11c., with a good supply in commission houses.

BEESWAX.—23c.
Oct. 10. M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is fair for choice comb in 1 and 2 lb. sections, which brings 12@15c. a pound in a jobbing way, according to quality and neatness of package. There is a fair retail and jobbing demand for extracted in square glass jars, while the order trade for dark grades from manufacturers is improving. Range of prices for extracted is 3½@7c. per lb.

BEESWAX.—It is in good demand, and good yellow brings readily 20c.

Oct. 9. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.

Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted; 3¼@3¾c. for amber extracted; and 9@11c. for comb honey in 2-lb. sections; darker grades bring 7@8c.

BEESWAX.—It finds buyers at 22@24c.

Sep. 28. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.
Oct. 18. O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¾c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Dull at 21c. for choice.

Oct. 21. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand for all grades is good, and sales are large. Receipts are good and prices are steady with a firm feeling. We quote: 1-lb. sections of white clover, 13@14c.; dark, 10@12c.; 2-lbs., white clover, 11@12c.; dark, 9@10c.; Calif. 2-lbs., 9@11c.; ½-lbs. white clover, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5½c.; Calif. amber, 5c.

BEESWAX.—20@22c.

Oct. 15. CLEMONS, CLOON & CO., cor. 4th & Walnut.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¼c. per light, extra.

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Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

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◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

TO OUR READERS.

We cannot too strongly urge upon our readers the necessity of subscribing for a family weekly newspaper of the first class—such, for instance, as THE INDEPENDENT, of New York. Were we obliged to select one publication for habitual and careful reading to the exclusion of all others, we should choose unhesitatingly THE INDEPENDENT. It is a newspaper, magazine, and review, all in one. It is a religious, a literary, an educational, a story, an art, a scientific, an agricultural, a financial, and a political paper combined. It has 32 folio pages and 21 departments. No matter what a person's religion, politics or profession may be, no matter what the age, sex, employment or condition may be, THE INDEPENDENT will prove a help, an instructor, an educator. Our readers can do no less than to send a postal for a free specimen copy, or for 30 cents the paper will be sent a month, enabling one to judge of its merits more critically. Its yearly subscription is $3, or two years for $5. Address, THE INDEPENDENT, 251 Broadway, New York City.

◆

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers for 1887.

◆

☞ **Sweet Clover,** or *Melilotus Alba*, is almost the only resource for honey now, on account of the late severe July drouth. If the seed is planted in September, it will come up this Fall and bloom next year, in its second season.

We have a **large lot** of this seed on hand, and offer it at the following **Reduced Prices,** by express or freight:

One pound	$0 20
" peck—15 lbs	2 25
" bushel—60 lbs	7 00
" sack—80 lbs	8 00

It will pay to buy it by the sack and sell it again in smaller quantities.

☞ If you want a chance to make some money, and provide pasturage for the bees during the Fall months, this is your opportunity!

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

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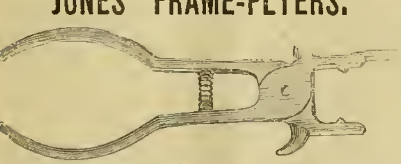

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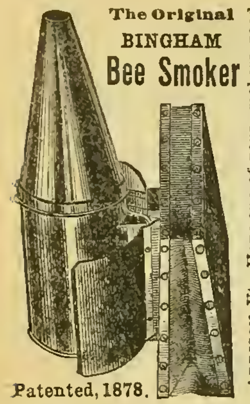

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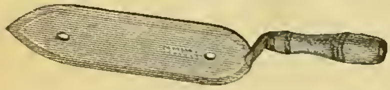

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Little Wonder smoker	1¾ "	..	65
Bingham & Hetherington Honey Knife, 2 inch			1 15

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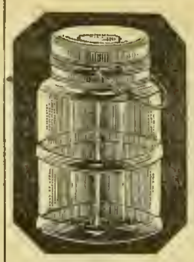

THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen,		.....	**$1.60**
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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

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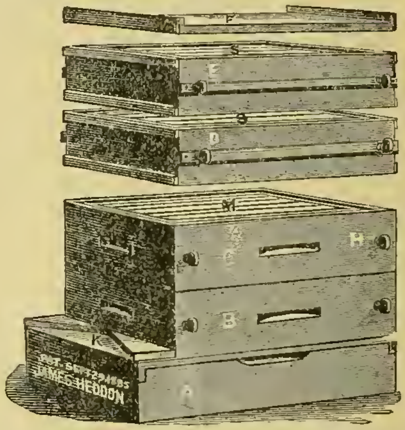
The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, Inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
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THE

AMERICAN APICULTURIST

WILL be sent one year and a copy of the 3rd Edition of the Bee-Keepers' Handy-Book, on receipt of $1.50. The book contains 300 pages and 100 fine illustrations.

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41Atf WENHAM, MASS.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Nov. 17, 1886. No. 46.

Why is a bootblack like a bee? It improves each shining hour.

A Carload of honey has been shipped to Kansas City by Bittenbender & Woodcock, of Knoxville, Iowa.

It would Pay producers to allow local stores a commission of 20 per cent on the sale of comb honey, if they would retail it at 20 cents per box, or per pound. Better this than to allow the local retail prices to run down to less than the net amount you would receive from the store.

We have Received a photographic view of a portion of the public apiary established in the Zoological Gardens in Philadelphia, Pa., by Mr. Arthur Todd, Vice-President for Pennsylvania of the North American Bee-Keepers' Society. In the centre of it stands Mr. Todd in the act of viewing a frame of brood and bees just taken from a hive. We have placed it upon the walls of our office, where it will be seen by our visitors.

Oatman & Brother, of Dundee, Ills., have just sold 38,000 pounds of comb honey in one lot, to a dealer for $5,000, *spot cash*. They always have a good crop, always winter their bees on the summer stands with success, and always sell their honey at a good price for cash. They are successful apiarists and shrewd business men, but they are very modest and quiet; and keep their own counsels. The above facts were gleaned from a "neighbor."

Gathering Honey.—The Saginaw, Mich., *Courier* of Nov. 2, 1886, contains the following:

> John Rey, the apiarist, has gathered in the season's work of his 118 colonies of bees, consisting of 4,000 pounds of extracted honey, and 2,000 pounds of comb honey. His bees are mostly Italians. They were yesterday engaged in gathering honey from raspberry blossoms, which is something unusual for this season of the year.

What Fools these Mortals be!—We have just learned of a transaction in proof of the above assertion. In a town which was considered to be a good market for honey, resides an apiarist who was supplying the town with a good article at a fair price. One day he was informed that some bee-keepers from a distance had hauled in a large lot of comb honey and retailed it "all over town" at 10 cents per pound. This ruined the market for the local apiarist, and compelled him to ship his to another town in order to get a fair price for it. Such things are to be deplored. There is no use of such ruinous competition, and every man ought to have enough *honor* about him not to do such a mean thing!

To prevent such transactions, would it not be well to get up a closer bond of union, and protect each other's interests? It is high time now to organize for protection. A central body should be incorporated, and issue charters for local organizations. These should have representation in the National body, and be under its control. What do you think, dear reader, of such a plan? To make the North American Bee-Keepers' Society such a central body would be very easy, and then to control the markets of the country by ascertaining the amount of the crop, and scattering it evenly over the great marts of trade, after satisfying the local demands.

The united wisdom of apiarists ought to be able to devise the ways and means and make a success of such an institution. We would propose that this important matter be discussed at the next Michigan State Convention, and let a committee be appointed to take the matter in hand, and after reviewing the whole ground, and corresponding with the principal apiarists of America, let the committee report through the bee-papers in time to have it acted upon by the next meeting of the International Society.

As this matter is one that interests every bee-keeper in America, we may reasonably expect that they will take hold of the matter in such a way as to bring it to a successful issue.

Let no one think that this is a *scheme to Newman-ize* anything or anybody! We neither desire nor expect to have any personal control over the matter. While we will do all we can to further the interests of the apiarists of America, in any way *they may deem expedient*, we would ask not to be placed on the committee, least any jealous or envious ones may thereby be discouraged from participating in this important matter. The editor of the BEE JOURNAL already has more "public duties" than he can well perform, and bears more of the "honors" which such bring than he cares to carry.

A Father can Give his Young Son no better present than a year's reading of the *Scientific American*. Its contents will lead the young mind in the path of thought, and if he treads there a while, he will forget frivolities and be of some account, and if he has an inventive or mechanical turn of mind, this paper will afford him more entertainment, as well as useful information, than he can obtain elsewhere.

The Michigan State Convention will convene at Ypsilanti on Dec. 1, 1886. We intended to call special attention to this meeting, as one of the most important and influential in the United States; but the following from Prof. Cook, just received as we were closing up the forms for this issue of the JOURNAL, will answer the same purpose:

> AGRICULTURAL COLLEGE, Mich., Nov. 11, 1886.
>
> DEAR MR. EDITOR:—May I present through your admirable JOURNAL a special invitation to the bee-keepers, not only of Michigan, but of adjoining States, to be with us at our next annual meeting to be held at Ypsilanti, on the Michigan Central Railroad, about thirty miles west of Detroit, on Dec. 1 and 2, 1886?
>
> Four topics of immense importance will be thoroughly discussed. "How to market our honey." "How to produce comb honey that will market itself." "Have we the best bee?" and "What of bee-forage?"
>
> Mr. A. I. Root promises to be with us, and we hope for and expect Messrs. D. A. Jones, J. B. Hall, and S. T. Pettit, of Ontario, Dr. Mason, of Toledo, the Editor of the AMERICAN BEE JOURNAL, and a host of others. It will be a rare "feast," just such as Secretary Cutting can serve up. "Come one; come all."
>
> A. J. COOK, *Pres.*

As the Editor of the AMERICAN BEE JOURNAL is engaged to deliver a lecture in this city on the evening of Dec. 1, 1886, he will be unable to be present at Ypsilanti, and participate in the deliberations of the convention. His representative will be present, however, to take a report of the proceedings which will duly appear in the BEE JOURNAL. Let there be a good attendance.

The Display of Honey at the Iowa State Fair was very large. Mr. J. W. Bittenbender, of Knoxville, had a magnificent exhibit of nearly 4,000 pounds in crates and jars. We acknowledge the receipt of a photograph of Mr. B's exhibit, which attests its dimensions as well as the tasty manner in which it is arranged. A pyramid of extracted honey in jars, contained 14 tiers, with two or three dozen glass jars exhibited in each tier. The crates of comb honey numbered about 16 in the lower tier, and 8 in the upper one, and 16 tiers of sections in height. There was also a display of implements for the apiary, which was quite creditable to Mr. B., who took nearly all the first premiums. The photograph also shows Mr. and Mrs. Bittenbender standing in front of the exhibit.

Buz, is the title of a new bee-novel. It gives the supposed "life and adventures of a honey-bee." It is written by Maurice Noel, and published by Henry Holt & Co., New York. We found it so very interesting that we read every word of it before closing the book. Our time is so much occupied that we could not do this except on a special occasion; this opportunity we found while returning from the Indianapolis Convention. *Puck* notices the book in this *funny* way:

> "Buz; or, the Life and Adventures of a Honey-Bee," by Maurice Noel (Henry Holt & Co.), is a meritorious little book. It describes the career of a bee in a sympathetic and picturesque manner, which will be interesting to young and old alike. It is easy to see that Mr. Noel has never picked a honey-bee before it was ripe. He does not know the warmth of a bee's affection for a man who is too previous. If he did, he would not be so familiar with the insects.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Alsike Clover and Dark Honey.

Query, No. 335.—Is Alsike clover the cause of my honey being dark colored? Is it not an injury instead of a benefit to sow it? It commenced to blossom on May 1, the same time the white clover commenced. I always had beautiful white honey every spring before my bees gathered honey from Alsike clover. It is almost as dark as buckwheat honey this year.—Cheviot, N. Y.

I think the bees gathered something else besides the Alsike.—G. L. TINKER.

No. Is there nothing else to gather honey from? Did you not have some honey-dew?—DADANT & SON.

I do not think that the Alsike made the trouble. I wish my bees were surrounded with it.—C. C. MILLER.

No. The Alsike honey is in every way the equal of that from white clover.—A. J. COOK.

I think not. Alsike produces light colored honey here. "Honey-dew" or something else may have colored your honey.—G. W. DEMAREE.

It is possible that the Alsike is the cause of your trouble. Alsike clover honey has a pinkish color, but not nearly so dark as buckwheat.—W. Z. HUTCHINSON.

Honey from Alsike clover proves to be darker color than from white clover, but nothing near as dark as buckwheat, in this locality. The flavor of honey from Alsike is excellent.—G. M. DOOLITTLE.

I have had no experience with Alsike clover. But I have seen honey claimed to be from Alsike that was the same in color as white clover.—H. D. CUTTING.

Alsike clover does not produce dark honey in this locality. I think that your dark honey came from something besides Alsike. Have you not in your locality some tulip trees, more commonly known as yellow poplar or white wood? The large bell-shaped flowers on these trees often give a copious and continued yield of deep wine-colored honey, though of very good flavor.—JAMES HEDDON.

The honey from Alsike clover is not dark colored in my vicinity; on the contrary it is very light. I consider from small experience, together with the testimony of many, that Alsike is a valuable honey-plant for the reason that is one of the best of foods for our stock, and as profitable as any to both raise and feed; therefore the honey gained is all profit, as it is extra entirely.—J. E. POND, JR.

Putting Bees into the Cellar.

Query, No. 336.—1. Is it best to put bees into the cellar before snow comes, or after? 2. Will it do to leave on the honey-board and raise the hive from the bottom-board? 3. Would one inch be too much for the bottom tier of hives?—Stittville, N. Y.

1. Generally before. 2. Yes.—C. C. MILLER.

1. Before the snow comes. 2. Yes. 3. No.—W. Z. HUTCHINSON.

It is always best to put bees into winter quarters before freezing weather sets in.—J. P. H. BROWN.

1. I put mine into the cellar about Nov. 15, before hard freezing weather comes. Snow makes little difference. 2. Yes; but I prefer a quilt or sawdust cushions, to a honey-board. 3. No.—G. M. DOOLITTLE.

1. I put them in at the beginning of the very cold weather. 2. Leave ventilation above and below; but not too much. 3. One inch space is not too much for any tier of hives.—DADANT & SON.

I would put bees into the cellar before it became severely cold. Snow may come, but still it may not be too cold to leave them out. Cold winds are more to be dreaded than a few very cold nights with the air still. 2. Yes. 3. No.—G. L. TINKER.

1. Yes, before snow comes. 2. Yes, you can do so. 3. I would prefer to raise the hive and put under a frame about 1-inch deep, that would leave you a space of 1⅜ under the frames. Leave a good entrance.—H. D. CUTTING.

1. I desire to have them in the cellar before very severe weather—usually about Nov. 15, here. 2. Yes, that will do nicely. 3. In a good cellar a space of 1 inch below would be excellent. I should like it; but the temperature of such a cellar must not go below 41°, Fahr.—A. J. COOK.

I believe it is detrimental to leave colonies out-doors until the temperature has gone low enough so that in order to keep warm they have been compelled to exercise. It is also dangerous to house them immediately after frequent and extended flights in search of nectar; for when bees are exercising, *i. e.*, laboring to the extent of wasting tissue, they will be at the same time consuming bee-bread, which consumption I believe to be the cause of bee-diarrhea, if confinement prevents frequent evacuation. When our bees are regularly working in the summer, if you carefully remove a colony to a cellar maintaining a temperature from 45° to 65°, or 60°, they will have bee-diarrhea in a few days. I would rather house them too late than too early, however. "Honey-boards" and "bottom-boards" and "spaces" have little to do with causing or preventing bee-diarrhea.—JAMES HEDDON.

Keeping Bees on Shares.

Query, No. 337.—Last June I took 6 colonies of bees of Mr. B. to work on shares, for one-half of the increase and one-half of the honey, each to furnish our own hives. Our hives being of different construction, I found it necessary to divide the bees at the time of swarming. There were 4 swarms; the first I put into B's hive, and the next into mine, and so on alternately. Two of B's colonies lost their queens, one of them being one of his old colonies; then a new one also, one of mine, lost a queen. I advised B. as soon as I had discovered that the queens were gone, and requested him to send me queens. He made no reply, so in time I furnished the queens. This fall those colonies are short of food for winter. Who ought to furnish food?—Ont.

Mr. B.—J. P. H. BROWN.

The expense should be borne equally by each, the one who has the bees on shares to do the feeding.—W. Z. HUTCHINSON.

On the proposition stated, I should say that each should furnish his own winter food. I judge that there was no surplus to divide, but that is "one of the fortunes of war."—J. E. POND, JR.

Partnership in bees is a poor ship to sail in, so many things will arise to cause dissatisfaction. As you state the question, you have no business to furnish queens or food for winter.—H. D. CUTTING.

My opinion would be that B. should pay for the two queens if they were purchased. If you reared them then it was a part of your work. In either event I should say each should furnish one-half of the food required to bring the bees through the winter.—G. M. DOOLITTLE.

I think that the bee-keeper should have reared the queens and introduced them to the queenless colonies, or at least should have given them just hatching brood from which they could rear queens. The cost of food for winter should be shared by each.—G. L. TINKER.

We think you should furnish food to those colonies unless otherwise agreed. Queen-rearing is a part of bee-keeping, and a bee-man should be expected to keep all his colonies supplied with queens. Besides, if there is any surplus honey it should be used, above all things, to supply any deficiency.—DADANT & SON.

Although you found it necessary to divide the bees at swarming time, owing to the difference in the hives, the division in fact should take place at the close of the honey season, or at such time as both of you were parties to the division, unless the original contract fixed the matter. If the queens were lost before the mutual division, you should have learned the expense of re-queening, otherwise the other party should have done it. If the honey and bees were properly divided, in the absence of any contract, each party should winter his own bees.—G. W. DEMAREE.

I should suppose each for his own bees, though I am not authority in such matters.—A. J. COOK.

As near as I can understand the spirit of the contract, I would say that it depends upon the bargain as to who was to supply queenless colonies. Unless differently agreed upon, I should hold you for such supply; and for the shortage in winter stores, both equally, unless it can be shown that the shortage is the effect of the queenlessness which B. had agreed to make good, and failed to do; then I should hold B. alone responsible for the lack of stores, and to supply such as are needed.—JAMES HEDDON.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
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Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 70
Canadian Bee Journal	2 00	1 75
Rays of Light	1 50	1 35
The 7 above-named papers	5 25	4 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

Convention Notices.

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 18, 19 and 20, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised. An unusually brilliant programme will be prepared and announced later.

☞ The eleventh annual meeting of the N. W. Ills. & S. W. Wis. Bee-Keepers' Association will be held in the Grand Army Hall in Rockford, Ills., on the third Tuesday in January, 1887. There will be a two days' session. J. STEWART, *Sec.*

☞ The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.
H. D. CUTTING, *Sec.*

☞ The Illinois Ceotral Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Nov. 24 and 25, 1886.
J. M. HAMBAUGH, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

☞ The Cedar Valley Bee-Keepers' Association will hold its next semi-annual meeting in the City Hall at Vinton, Iowa, on Dec. 7 and 8, 1886. An excellent programme will be presnted, including essays by the very best of Iowa apiarists. Special rates have been secured at the Hotels, and all are invited to come and help make this meeting both pleasant and profitable. H. E. HUBBARD, *Sec.*

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ☉ indicates that the apiarist is located near the center of the State named; ⚨ north of the center; ♀ south; ⊸ east; ⟜ west; and this ♂ northeast; ☌ northwest: ⚲ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Wintering Problem.

W. J. CULLINAN.

The very heading of this article will doubtless prevent many from perusing the same, especially the old-timers who think that they do not need any advice on wintering bees, and do not have to give any. But "let your light shine," should be the motto of all the members of the bee-keeping fraternity. If by a few words, either written or spoken, I can keep others off the rock upon which my ship was stranded, I am certainly lacking in humanitarian principles if I do not utter those "few words."

Having theorized but little upon the science of bee-culture, and never having practiced it scientifically, I shall not attempt to argue this self-important question from a scientific stand-point; but in homely phrase I shall tell a few things that I have learned, and paid for learning. There may be beginners in the field to whom these words of warning, though plainly spoken, will come greeting. While I do not wish to "tread upon the toes" of those who have been theorizing upon this problem, and studying its relation to science, I cannot help thinking that if a few grains of common-sense were mixed into many of the recipes, instead of the fine-spun theories and scientific analogies so frequently given, such recipes would be of far more service to the vast army of bee-keepers who have no time for theorizing, and no desire for the study of science. It is all right for Profs. Cook, McLain and others who have the time and inclination, to practice bee-keeping upon scientific principles—and there is no denying the fact that their researches are not only important, but of untold value to the cause. What the majority of bee-keepers want, however, is a simple, common-sense method of wintering bees, a method that is practical, concise, and that any one can follow.

While I am of the opinion that the cellar is the safest and best place to winter bees, if the conditions are right, I believe that in the absence of those conditions the summer stand is preferable, provided that ample protection of a proper kind is given. As I have never had any experience in cellar-wintering of bees, I shall refer the reader to the methods of Ira Barber, G. M. Doolittle, and others, frequently detailed in the bee-papers, and which may be safely followed.

The first year I kept bees I wintered them unprotected and unmolested upon the summer stands, leaving them the whole of an 8-frame Langstroth hive to keep warm during the whole of that bitter cold winter of 1884-85, and the consequence was they came through very weak in bees. Last winter I acted upon the advice of a brother bee-keeper, and removed the outside frames of my 10-frame Simplicity hives, placed a piece of burlap next to the remaining outside combs, and filled in between that and the wall of the hive with chaff; over the frames I placed a chaff cushion, the lid fitting down tight over the same. I then grouped the hives together in twos and threes, and over and around them I piled hay and straw to a depth of about two feet on top, leaving the entrances open. No water could possible get in from the outside, and yet in the latter part of the winter water collected and ran down on the inside of the hives, completely blocking the entrances to some of them. As a result I lost 7 colonies out of 15; and some of the surviving colonies were in a weak condition.

I am confident that none died from cold, excepting one that was weak in bees when put into winter quarters, for when raking the snow away from the entrances in the coldest weather, steam would issue therefrom, attesting the presence of sufficient warmth; and that they did not die from starvation, ample stores in the hives of the dead colonies bore testimony.

Then, what killed my bees? Upon examination I found the combs were damp and moldy, and full of dead bees, and I very naturally concluded that they died of too much packing.

This year I am preparing my bees as follows: Examining first to see that they have ample stores, I crowd the bees to the south side of the hive on 4 or 5 Langstroth frames, according to strength, placing a division-board on the north, and feed where I think it is needed. Before the advent of cold weather I shall pack between the division-board and north wall of the hive with dry sawdust, and over the frames put the same material six inches in depth; then ventilating the lid with a 1¼-inch auger-hole in each end, and banking around the hives with earth four inches above the bottom-board. I shall then leave my pets to enter their long winter's sleep, confidently expecting them to awaken betimes in the spring and begin the season of 1887 with renewed zeal, in which case I shall consider myself well rewarded for my labor.

A word as to feed: I consider pure, well-ripened honey, either fall or summer-gathered, preferable to any other food for bees; of course in the absence of such, sugar syrup makes a good substitute. I believe the two great essentials to safe wintering to be these, viz: plenty of wholesome food, and proper protection from dampness and cold.

Mt. Sterling,+o Ills.

For the American Bee Journal.

Acorn Honey—Report for 1886.

C. THEILMANN.

Never before this summer have my bees gathered honey from acorns or honey-dew that was noticeable, notwithstanding I have seen them work on oak-trees and acorns at times through the summer and fall for a number of years; but this summer they have gathered over 3,000 pounds of surplus from acorns alone, besides storing considerable in the brood department. The honey tastes very noticeable to me of tannin, but some people say they cannot discover any by-taste; the color is bluish white, with a muddy appearance, though the honey is clear.

On a visit to St. Paul and Minneapolis, Minn., I noticed a great deal of this kind of honey which came from Wisconsin, Iowa, and this State. It is easily detected by the bluish white color of the capping on the combs. Prof. Cook kindly tells us that the acorns are pierced by an insect, and the saliva of the insect foments the starch of the acorn into honey, which flows from the acorns freely (as I have observed closely), runs down on the branches and scatters on the leaves all over the trees, and in one instant I have seen the leaves of corn sprinkled with it, which grew under an oak-tree.

I am not yet convinced whether the honey is caused by the insect above mentioned, or whether it is caused by the weather under certain influences which bursts the acorn, as nearly all of them which I have closely examined had an oblong cut or burst horizontally or crosswise of the acorn. When I first saw the bees working on the oak leaves, honey-dew was my first impression, and I have no doubt that many would have called it louse honey, even if they could not see any lice; if we always correctly understood the origin of what is called honey-dew, we would have but little louse honey.

The milk-weeds which I have sent to Prof. Cook for examination, and which were dripping with sweets when I cut them from the stalks, I have no doubt came from the lice on them, as they have extracted some clear, sweet substance similar to granulated sugar syrup, visible with the naked eye, and with the microscope they showed drops of crystals on the under side of the leaves while folded (underside to underside) and lying over night on a window-casing; but the curiosity was, that the bees did not touch the sweets on these milk-weeds, which were in my pasture, while at the same time they worked thickly on their flowers. The leaves were dripping with sweets from the lice for over ten days, but I have not discovered a single bee working on them, but on some stalks the ants gathered it very clean.

All of my 163 colonies which I put into winter quarters last fall, came out alive and in excellent condition. I put them out on April 10, and in less than two hours they brought in pollen and honey. The weather being very favorable through April, they filled their hives with brood very rapidly, so that on May 1 they were one month in advance, compared with other years.

I sold 15 colonies and commenced the season with 148, and increased them by natural swarming to 197 colonies. My surplus honey was a little over 11,000 pounds, all of which was in one-pound sections, except about 600 of extracted, the latter being mostly from unfinished sections. I never leave over any honey in unfinished sections to be finished the next season, as there is a good deal wasted and candied, and besides, it makes very bad looking honey, some of it being sour and unfit for sale. If we care anything for our good names as first-class honey producers, we should always extract unfinished sections.

The flow of honey was slow, but nearly steady from the time that white clover commenced to bloom until the latter part of August, when it ceased, with abundance of bloom, on account of the weather being rainy and cold. They had only two good days in September to gather much honey. The past week the weather was nice and warm, the temperature being 75° to 80° in the shade, but the bees could not get much, as a heavy frost about ten days ago had killed nearly all the flowers. My bees all have natural stores enough for winter, and are all prepared; some of them had not enough and others had more stores than they needed. I have equalized them according to strength and other conditions, by taking full frames of honey from the heavy ones and giving them to those that were too light; not believing in guess work, I went from hive to hive, weighing and equalizing them. I calculated that each colony had from 25 to 35 pounds of honey, according to strength, which should be known by the apiarist, and calculations made accordingly.

I think it is far more important for the practical apiarist to have his hives, or rather his frames, all of one size, so that every frame fits every hive he has. He then can change frames from any and every hive, to all. This is one of the most important points in manipulating an apiary, and there is where some leading bee-keepers make great mistakes (except for experiments) in allowing from two to a dozen or more different frames and hives in their apiaries. It is absolutely untrue that they can get more than double or even one-quarter more honey with one hive, than with another, other things being equal. It is not the hive that produces the honey. This should be considered by all bee-keepers.

Thielmanton,○ Minn., Oct. 16, 1886.

For the American Bee Journal.

Painted Hives—Hatching Bee-Eggs.

A. J. COOK.

In reply to Mrs. O. F. Jackson, on page 698, it may be said that paint surely does stop up the pores of wood, and so stop the passage of air. Hence, if it is wise to secure this freer circulation, which, of course, will remove moisture, then no paint would be the order.

But under proper management painted hives do well; in other circumstances, all hives fail. I would always paint my hives, not that it will always pay in dollars and cents, but for neatness sake.

I prefer to have my hives closed in the winter except at the entrances, which I would have wide open, if in the cellar, which is the best place I think in this latitude. That bees will winter well in some cases is shown in the fact that I once had a colony winter exceedingly well with a sealed cover, and ice-closed entrance. Nor was the ice melted at the entrance; it was still frozen in the spring. This hive was painted. This might not happen again, as the conditions must be just right. I expected to lose the colony. In most cases I probably would not be disappointed.

In the interesting article by Mr. Doolittle, on page 693, he asks if bees can retard the hatching of eggs. I do not think they can, except as they suffer them to chill. By putting eggs of insects in ice-boxes, or in any cold place, the hatching can be indefinitely postponed. Thus I have known eggs to be kept three years before hatching, when normally they would have hatched in less than one. Again, we can hatch bee-eggs artificially if we secure the proper heat; hence we disprove the chyme theory. In case the queen keeps laying, the bees must destroy the eggs, or suffer them to become chilled, or else there will, I think, be brood very soon.

I want to add that I have tried the solar wax-extractor thoroughly, and think that it is worth all its inventor, Mr. Poppleton, has said in its praise.

Agricultural College,♀ Mich.

For the American Bee Journal.

Colonies Refusing to Unite, etc.

M. W. MAHONY.

About a month ago I found that one of my colonies had dwindled considerably in numbers. I thought the queen was lost, but on examination I found a small portion of brood in all stages. I then concluded that she must be a bad layer (though only 3 years old), and was determined to remove her and unite the colony with another, but I could not find her when I went to look. I did unite them, however, by transferring combs and bees of a swarm I got on July 4, into the dwindling lot, putting the the transferred bees at the back of the hive and sprinkling both with syrup, into which a few drops of the essence of cloves had been put; there was very little fighting—not 50 bees killed.

Now comes the extraordinary part of the business. I have examined them repeatedly since uniting them, and I find that both colonies are apparently as distinct now as when they occupied separate hives; the old bees crawl about in the same listless manner as before being joined by the others, while the latter are as frisky and as "full of sting" (there is about a fourth Ligurian blood in them) as bees ought to be. The old (dwindled) colony is one that I got in May, 1885; they were then put into a combination hive on full sheets of foundation, and did very well last year; this year I got a little over 20 sections from them.

I have examined the combs carefully, and I can find nothing wrong. I have also kept a look-out for a rejected queen, but I have not seen one. Can any of the readers of the AMERICAN BEE JOURNAL explain this objection on the part of the bees to unite?

I anxiously await the coming of the excellent weekly AMERICAN BEE JOURNAL, which I get here never later than 13 days after the date of publication. The past has been a bad season for bee-keepers in this country. I got more than twice the quantity of honey last year from 2 colonies of bees.

Killarney, Ireland, Oct. 6, 1886.

For the American Bee Journal.

"Simmins' Non-Swarming System."

W. Z. HUTCHINSON.

So many of the foreign works that I have read have such a slow, measured, solemn, away-behind-the-times style about them, as compared with the quick, light, elastic "get-there" tread of our American authors, that I was most agreeably surprised to find a decidedly American air about the book entitled "Simmins' Non-Swarming System." It is quite evident that the author is a close reader of American apicultural literature; in fact, some of the methods and practices advocated by Mr. Simmins have been discussed quite recently in these columns.

Although the author writes briefly upon quite a number of bee-keeping topics, yet the grand central idea is the prevention of swarming. The principle consists in giving the bees more room than they require in the shape of unfinished combs, adjoining or next to the entrance. The author states that it is a fact that no colony in normal condition attempts to swarm unless it has all its brood-combs completed. He says that the probable reason why this has escaped the notice of bee-keepers, is because all have become so wedded to the use of foundation, that such a thing as frames having starters only as a guide to the bees, could not possibly enter their heads; and, moreover, the next great difficulty in producing comb honey would be getting rid of the long-fixed idea that bees will never work in supers until all brood-combs are finished and occupied.

The fact is, however, that by limiting the number of brood-combs just before the season commences, then inserting below or in front of such brood-combs several frames with ¼-inch starters only, having more room than they require in the nursery, the desire for swarming does not exist, while for all practical purposes the bees can be at once crowded into the sections; the latter being first filled with newly built combs. By carefully regulating the surplus department, and removing combs as fast as finished, the frames with starters never have finished combs.

The sections being filled with combs the bees fill those rather than go on building comb to any great extent below the brood-nest. The system offers still another advantage. The author says that he has long been of the opinion that foundation is being used in the brood-chamber at a serious loss. He says that brood-combs can be produced by sugar-feeding previous to the honey-flow more cheaply than foundation can be purchased; and, moreover, when hiving swarms (natural or artificial), if frames with guides only be used instead of full sheets of foundation, the whole energy of the bees is thrown upon the supers. It will be seen, he continues, how by first placing a limit on the size of the brood-nest, then averaging empty frames between it and the entrance, the bees have every opportunity to profitably apply their surplus secretion of wax; thus, instead of being simply a consumer of this article, the apiarist of the future will produce wax at a profit. This natural secretion of the bees is probably always present during a flow of honey, so says Mr. Simmins, and instead of the wax scales being cast away for want of a suitable place to use them, this system finds room and employment for all surplus that may be present.

The comb that is cut out below the brood-nest is fitted into the sections. If it contains eggs or small larvæ before it is removed, it is kept away from the bees until the eggs or larvæ have lost their vitality. Perhaps some will remember that Mr. Boardman remarked last December at Detroit, that *he* hived his bees upon empty frames, then cut out the combs and fitted them into the sections. It seemed to me at the time as being quite a task, and it still appears the same, as does this cutting out of combs below the brood-nest to prevent swarming; but I am very much interested in it—it is a new idea to me, and I presume I shall give it a trial another season simply to see how it works. Whether inverting the brood-nest weekly would prevent swarming, I do not know; my experience in that line has been too limited. In my own apiary I do not care to prevent swarming, but I can easily see that it would be a great advantage to one who wishes to establish out apiaries.

To secure combs for filling the sections, Mr. Simmins puts on an upper story with frames of foundation before the honey harvest, then places dummies, filled with dry Porto Rico sugar, upon each side of the brood-nest and each side of the frames of foundation. With a good colony on the third day the foundation will be drawn out, when it is removed and a fresh batch inserted.

The author says that there has been a tendency of late to start bees upon a *few* sections early in the season. This is very well with weak colonies, but with such colonies as will give a fair profit, a larger super room should be given at the start; more particularly is this the case with the plan of obtaining combs for the sections before the honey harvest comes on. He says: "Give a good colony 40 pounds capacity, and they will fill it; give it 60 pounds and they will do the same, and so on almost without limit. Under this condition the brood-nest is left comparatively free from stores, and the population is kept at about one thing until towards the close of the season; but cramp them to begin with, and they are cramped in every way until the end of the summer."

Mr. Simmins says, also, that from the moment that surplus receptacles are put on, the production of brood should be on the decline. He farther says that it will be observed that he has laid great stress upon the necessity of so managing the surplus arrangements that the brood-nest is not crowded with honey, and on no occasion should it become necessary to extract from the brood-combs when producing comb honey, as is recommended by some writers, who thereby acknowledge their system to be at fault. When the season is over the bees will need feeding, and he advises giving them 20 pounds of sugar syrup in one or two doses. He then points out the profits of wintering the bees on sugar, and that by so doing good colonies are secured for the next season's work.

Without a doubt, says Mr. Simmins, there are no bees which cap their honey and give it such a light appearance as do the native blacks; he also adds that Ligurian queens mated to black drones are very prolific and give energetic workers, producing honey in much larger quantities than the bees of either pure race. Their combs do not present quite so light an appearance as that of the blacks. For the production of extracted honey Mr. S. thinks that the Cyprians stand at the head of all.

The direct introduction of queens is treated at some length, but as this has already been given in these columns I will not notice it, except to say that I had proved it to be a success long before I had heard that any one else had practiced it.

The author is a strong advocate of the practice of feeding *dry* sugar to bees instead of making it into syrup. The sugar best adapted for dry feeding is that known as Porto Rico. It is unrefined, but very pure, and is soft and moist, therefore well suited to the purpose. It is placed in feeders of a dummy pattern, and hung at the side of the brood-nest; it may also be placed in a feeder having a wire-cloth bottom, which is placed over the bees.

Mr. S. has also an uncapping machine, the first principle of which consists in its having two oscillating knives, which, driven by foot power, have a reverse motion while the comb is passed down between them and the cappings are quickly removed from both sides at once. In order to make this a success the combs must be built between separators, or, as Mr. S. calls them, "dividers." When producing extracted honey, Mr. S. uses these "dividers" in the supers or upper stories. It seems to me as though all this is "too much machinery."

The author is opposed to reversible frames and hives, but it would seem from his remarks upon the subject that his acquaintance with them has been confined to clumsy or ill-contrived styles. For instance, he speaks of working with a standard frame with no bottom "rail," thus he has a comb one inch deeper than those who use a thick "rail" for reversing. (!) He says he made a number of hives in 1876, which could be reversed entire, and he has proved to *his* satisfaction that the plan is based upon no sound principle; that it causes more labor, and no better results can be obtained. My own experience is that those results which Mr. S. so justly praises, viz: empty brood-nests at the end of the season, and thus an opportunity of feeding sugar for winter can be secured with less labor by invertible hives than by any other method; and I think if Mr. S. could give the best style of invertible hive a fair trial he would be of the same opinion. One thing is certain, all things must eventually stand upon their merits.

Now let no one who reads this review write to me or to the AMERICAN BEE JOURNAL and ask questions or criticise, until they have first read the book, as they may therein find an answer. Many other topics are treated in the book, but lack of space forbids even mention of them. Books that tell us exactly *how* to do things are valuable, but if there is any book that I thoroughly enjoy it is one that sets me thinking; that furnishes me seed thoughts. Such is "Simmins' Non-Swarming System."

Rogersville, ♂ Mich.

For the American Bee Journal.

The Poetry of Bee-Keeping.

EUGENE SECOR.

Neighbor Smith is something of a wag. Neighbor Smith is also interested in bee-keeping. He has been in the habit of borrowing my bee-papers to read. One of neighbor Smith's favorite maxims is, "Never buy anything you can borrow." Another is, "What's the use of having friends if you don't use them."

Neighbor Smith brought home the borrowed papers the other evening. That was in violation of another of his favorite sayings, viz: "It's trouble enough to borrow a thing without having to return it." "But," he added with a twinkle in his eye, which made me think of Santa Claus, "I like those apples of yours pretty well, and as the evenings are getting long, and the time before election short, I just thought I would make an excuse to come over to talk politics, religion or *bees*."

"What part of the bee-papers do I like best? Well, I'll just give you my humble opinion that *Doolittle* wasn't well named; for he *does more* than any other writer to convince me that he knows what he's talking about. There's no fustian about him. He don't expect to start a National bank from the proceeds of 10 colonies of bees in one season without work.

"Another thing I've noticed lately in the bee-papers which makes an old veteran like me laugh all over—that's the *poetry* of bee-keeping. I wish some of those distinguished literary lights, who have been writing poetry about the bees, and about the poetry of bee-keeping, would just come and help me take off my honey after the first hard frost, and get the bees ready for winter. If they didn't sing a different song then, I'd have some faith in this poetry business. I would like to see some who are overflowing with poetic bubbles, go through a few hybrid colonies the second day after a hard frost. If they didn't hibernate in the bosom of their families after a few charges, then I'd believe that bee-keeping was good for the sick—for the women as well—for the dude of the town or the country belle.

"I never have seen two lines of poetry in the bee-business in 25 years of hard work; and the nearest to poetry of anything that I ever read of, was when Samson extracted honey out of the carcass of a dead lion on his way to see his girl. There's a little of the "sweet hum" in that, no mistake. But we who have to rustle for a living find but little poetry in the back-aches and the arm-aches and the sting-aches of the honey-business. And, then, after we've toiled like a galley-slave to get a crop, to have some grocery-man, whose only capital is cheek, to tell us that we *made* it! Or, if it is comb honey, to have some honest granger who happens to have the enormous crop of 200 pounds, demoralize the market by dickering it off for 8 or 10 cents per pound.

"You who have only ten or a dozen colonies, and get just honey enough to treat your friends when they come to see you, can see all the winsome delights and poetical fancies that an idle dreamer can imagine. You probably let the patient wife or the dutiful son do all the hard work in the bee-yard. You put me in mind of a hen with one chicken. She makes just as much noise, and puts on just as many airs as though she were a patent, double-decked incubator. If we could understand her clack she would probably be singing about the charming pastimes of the chicken business; while the staid old biddy that comes off with thirteen chicks every clatter, is too busy scratching worms to see the rythmical lines floating in the dreamy atmosphere down in the brush lot.

"We who produce all the honey don't have the time nor the self-assurance to tell more than we know through the bee-papers. We don't care enough about seeing our names in print to give ten pounds of honey to every local editor for a puff, either. Now you may say to any of these 'sweet hum' men who are anxious to embark in light and profitable business, adapted to gentlemen in poor health or sickly women, that I'll sell 100 colonies, poetry and all, cheap. But the poetry would be something like this:

'Tis the bees' delight to buzz and *bite*—
They're always spoiling for a fight,
And always sure to win it.
They'll knock the music out of a poet,
They'll make a rheumaticky subject go it,
Though he couldn't stir a peg he'd shin it—

if two or three good healthy hybrids of warlike instincts struck a bee-line for some prominent bare spot about his physiognomy."

Neighbor Smith said many more things during the evening, which I have not now time to relate.

Forest City, ♂ Iowa.

Canadian Apiarists in London.

The Canadians who have taken their honey to London to exhibit at the "Colonial," were tendered a banquet by the British apiarists, which was a very brilliant affair. The *British Bee Journal* speaking of it, remarks as follows:

The bee-keepers of Great Britain have good reason to look back on the gathering that took place on Wednesday, Oct. 6, at the Exhibition at South Kensington, with no slight degree of hopefulness and complacency. The primary object of the meeting, namely, to extend the hand of friendship and fellowship to those who in a distant country are occupied in the same pursuit as themselves, was one that would commend itself to all imbued with fraternal feelings. But while this was the principal cause that induced so many to gather together, other thoughts must have flashed across their minds when they contemplated the great number that were present at the luncheon at mid-day, and at the conversation in the evening.

It seems but a short time ago that bee-keeping was an industry struggling for a bare existence, scarcely known or recognized, disregarded by most people, practiced by few; but prescient minds conceived the idea that this industry, so weak and so obscure, might be fostered and become a boon to many cottagers and laborers; and fraught with this view they brushed aside the indifference of those around, and, by dint of perseverance, energy, and tact—never losing hope, marching on, they at length attained their sought-for end. Some that sowed have not reaped—

some have fallen by the way; but still many in our midst that in the past took an active part in this movement can look backward with joy and thankfulness on the results of their labors, and with hopefulness can contemplate the future that still lies before them. The sight of so many bee-keepers thus brought together—representatives of the respective places in which the lot of each is cast—will cause them "to renew their strength," and with firmer steps and with more determined resolve proceed on their onward way, and strive to overtake their still unfinished work.

The day of the Conference at South Kensington will be one that will ever be remembered by those present on the occasion. The arrangements were most satisfactory. The feelings that predominated in the breasts of British bee-keepers towards their Canadian brethren were hearty and sincere, and those feelings found a ready response in the hearts of those whom on this day they delighted to honor. Though embarked in the same pursuit, there will be, we are assured, no undue rivalry, but both, Canadians and British, will combine with all their strength to extend and increase the industry which they have so much at heart; and we may argue, from the spirit that pervaded the meeting, that these endeavors will not be without their full realization.

At the banquet there were about 100 ladies and gentlemen, including the principal apiarists of Great Britain. We quote again from the *British Bee Journal*, as follows:

The chairman, in proposing the the toast of the Queen, said he was sure that the spirit of loyalty to Her Majesty was equally as strong in the hearts of their Colonial friends as in those of Englishmen generally. Every bee-keeper knew that if he wished to have strong colonies he must have a good queen. Fortunately, in England they had a good Queen, and it was during her reign that Britain's colonial possessions had grown to gigantic power and strength. (Loud cheers.)

The Hon. and Rev. Henry Bligh proposed the health of the Prince and Princess of Wales and the other members of the Royal Family. He said that the thanks of all bee-keepers were specially due to the Prince of Wales, who was President of the Executive of the Colonial Exhibition, for his kindness in giving the necessary permission for the holding of their recent Honey Show, which was a grand success, and of which the meeting held that day was the outcome. Not many weeks before their Royal Highnesses, the Prince and Princess, had attended the bee-exhibition held at Norwich, where they evinced the greatest interest in the wonders of the bee-tent. Later on in the year, and in another part of the country, Princess Beatrice had kindly assisted their cause by opening the Bee-Show held at Southampton, where she gave the prizes to successful exhibitors. He thought the work in which they were engaged was a national one—he might almost say an imperial one, for they took the greatest pleasure in laboring hand in hand with their brethren in all parts of the British Empire.

The Rev. G. Gaynor, in proposing "Prosperity to the Colonies," said he thought the Colonies were certain to be prosperous, because they contained a population possessed of all those characteristics of the Anglo-Saxon race, which had shown such wonderful ability for colonizing, far greater than any other nation of the globe. When Englishmen looked on and saw the wondrous productions of their Colonies (Greater Britain, as they had been termed) they might well doubt whether the mother country would compete with her Colonies of that day. What the future would develop no one could tell, but when they saw that the Colonies could bring to an Exhibition like the present one forty tons of the most superb comb and extracted honey, it behooved the mother country to look around and exert all her energies to keep pace with her children. The difficulty of doing so was apparent in many ways, and not least when they looked at the productions of wheat grain in the Colonies of Australia and New Zealand—far finer than anything that could be produced in Britain. Thirty-five years ago in Kangaroo Island, which was at the present time devoted to the breeding of Italian bees in their pure state, the Legislature of South Australia prohibited the introduction of any other race of bees in that island. They could boast of nothing like that in the old country. They imported Italian bees, but did not attempt to keep the race pure. He thought it was very likely that the Exhibition would become a permanency, in which event they would, he was delighted to say, have many opportunities of fraternizing with their brother bee-keepers from the other side of the Atlantic, which he hoped would tend to increase the bonds of amity between the mother country and her children.

Dr. May (commissioner for education, Canada) said he could not find adequate words wherewith to express his acknowledgements of the kind manner in which the toast had been proposed and accepted of "Prosperity to our Colonies." The first thing upon which he must congratulate the British Bee-Keepers' Association was that they had a taste for the beautiful, which was evident by the presence of so many ladies at their gathering—a proof that bee-keepers were loyal to other queens besides the queen-bee. (Laughter.) On behalf of the Colonies he was glad to say they were a prospering colony who were proud of their connection with the parent colony, and far from entering into rivalry they wished to work hand in hand with the mother country. He hoped they would not think him egotistic if he spoke of his own colony in particular. Very little had been known hitherto about Canada in the old country. Canada had been described, only recently, as being fifty miles wide, and separated by a belt of trees from the North Pole. (Laughter.) That was an extraordinary statement. The fact was, that they had an area of about 3,500,000 square miles, which made their territory something like the size of Europe. They had a climate which was often spoken of as six months of winter and six months of summer. In that section of Ontario from which their friends, the honey-producers came, the winter commenced in the latter part of December and terminated in March. If they could draw a line straight across the Atlantic from South Ontario, it would be found to strike somewhere about the latitude of Rome. They would, therefore, understand that Canada was a tract of land which was very prolific and literally flowing with milk and honey. They were a most hospitable people there, and he was sure that if any of their friends in England would pay a visit to Canada, they would find that to be a fact. With regard to the honey of his country, their English friends would be enabled to judge for themselves. There was no doubt that Canadians were a people full of indomitable perseverance and energy. They were not content to sit down and be satisfied with present successes. Mr. Jones, as they all knew, had done very much for bee-keeping. He was called the king-bee in his own country. In spite of his unique position in the bee-world, he was not satisfied, because he could not find a bee with a proboscis sufficiently long to enable it to gather honey from all sources. He had been all over the world in search of such a bee, which he was determined to find or breed if possible. If they could not discover a bee with the desired proboscis, they must endeavor to gain their purpose by giving artificial aid to the little insect. (Laughter.) He then referred to the excellent system of free education which prevailed in Ontario, whereby the sons and daughters of rich and poor were educated alike, by which means latent talent, which was frequently to be met with in the children of the poorest classes, was given free scope for development. They also had a Mechanics' Institute, supported by the Government for the instruction of adults. He was sorry his education in regard to bees had been very much neglected, but he remembered that little poem which began, "How doth the little busy bee," etc., and if they would allow him to improvise upon that, he would say:—

Canada is a great country for honey,
It is there farmers and bee-keepers make lots of money.
Our bees extract nectar from flowers so sweet,
That all nations consider our honey a treat.

(Loud laughter.) With regard to the loyalty of the Canadian people, they claim to be in no way inferior to their English brethren. Anything that affected the liberty of England was a matter of the greatest interest and solicitude to her children across the ocean, who were justly proud of their illustrious parentage. (Loud cheers.)

Mr. Stewart proposed the toast of the "Ontario Bee-Keepers' Association," coupling with it the names of

Mr. S. Corneil and Mr. McKnight, two gentlemen who, as representatives of that Association, had honored them with their company that day. He recommended all present not to leave the Exhibition without seeing the splendid display of honey from Canada then on view. They might be quite sure of the courtesy of the gentlemen named. He had experienced it, and was much gratified with what he had witnessed under their guidance. Although English bee-keepers had made great strides of late years, they would still find something to learn from their Canadian fellow-workers.

Mr. S. Corneil said it afforded him great pleasure to be present at that meeting. Bee-keeping in Ontario was quite a new industry. It was only a very few years ago since he remembered noticing in one of the papers an announcement that their friend Mr. Jones was taking a barrel of honey per day. That would be considered a very small affair in the present day. It was, however, only during the last 12 or 15 years that the industry had grown to such great proportions. He was quite sure that the news of the cordial reception he and his friends had met with from English bee-keepers would be received with gratitude by his fellow-countrymen. Bee-keepers all over the world had a great deal in common. They wished to discuss and compare notes. They were all learners. He had learnt several matters of importance since his arrival in London. With regard to the production of honey in Canada, he well knew that they had climatic advantages, owing to the large amount of sunshine with which they were favored during the summer months. Their climate was everything that could be desired for the secretion of nectar in the flowers. The assistance rendered by bees to the agriculturist was well appreciated in his country. They gathered the finest honey from the clover fields, and the farmers found from common observation that when their farms were close to a large apiary of bees, their fields yielded them far more seeds per acre than would otherwise be the case. Thus the bees conferred a double benefit on man; so much so that most farmers took to bee-keeping in order to increase their crops of clover seed. In Canada there were only five or six millions of people. They were scattered over a large extent of territory. Hitherto Canadian bee-keepers had kept at home all the honey they produced. In Britain there were a great many more than five million people, and having heard that honey was constantly being imported from other countries into England, the bee-keepers of Canada thought that whatever profits were to be obtained by imports, friends might as well get them as strangers. They had, therefore, come over in the hope of securing a small share in the advantages of the honey trade.

Mr. McKnight desired to thank the British Bee-Keepers' Association in the name and on behalf of Canadian bee-keepers for the splendid entertainment afforded to their delegates. They recognized the right hand of fellowship extended from the mother country. He could tell his audience that he and his friends would carry home the most pleasing recollections of the way in which they had been entertained by the bee-keepers of Britain. They, as representatives of the Ontario Association, came over to show what their country could produce. Their land was veritably the Canaan of America, flowing with milk and honey. If any one doubted that, let him make his way to the honey exhibition, where he would find conclusive evidence of the fact. They came over to make glad the hearts of their own mother England. Every mother ought to be proud of her offspring, and it must afford her gratification when they conducted themselves in life so as to win her approbation. He was sure that England must be proud when she saw what they had been doing beyond the seas. They had proved that they had not been lying on their oars, and, in fact, that they had added as much to the glory of Great Britain as her soldiers and sailors had done in years past. They had made primeval forests to disappear, and in their place raise up the fruits of the earth. Those were the battle fields on which their victories had been fought and won, and it required a stout heart to engage in those fights. It was an old saying that bee-keepers were a very fine class of people. (Laughter.) Well, there was no question that they possessed some excellent characteristics. Their pursuit necessitated a large amount of moral courage, patience, and perseverance. One seldom found a successful bee-keeper to be a cross-grained and bald-hearted man. Possibly the reason of this was that he had a peculiar being to deal with, and one who would defend its home and property with Spartan courage. (Cheers.)

The chairman regreted the absence of Mr. Pettit, the President of the Ontario Bee-Keepers' Association, who had been obliged to leave that day. Before his departure he requested the chairman to express his cordial acknowledgements of the kindness of the British Bee-Keepers' Association.

The Rev. F. Jenyns said he had been asked to propose the health of those who were amongst them as visitors, and whose presence added much to the pleasure of the gathering. He trusted they would do their best to carry into their respective districts a knowledge of what they had seen and heard that day. The meeting was honored by the presence of two distinguished visitors, namely, the Secretary of the Swiss Association, a most advanced bee-keeper, and also the President of the Devonshire Association, whose connection and relationship with Mr. Woodbury would alone entitle him to the respect of all bee-keepers. He felt sure all present would be able to look back on that day with happy remembrances, for it was a remarkable day, not only for the pleasure it afforded to so many bee-keepers of coming together, but because it showed the wonderful development of their favorite industry, which, upon a retrospect of a few years, one would hardly have believed possible. That was a source of great gratification to the British Bee-Keepers' Association, to whose efforts that result, to a large extent, was due. Of course they could not but be delighted to find that their objects and aims had spread so far west as Ontario. He hoped that the meeting would tend to promote the good work in which they were engaged, and strengthen the bonds of friendship which he believed existed among all bee-keepers.

Pasteur Descoulayes (who spoke in French), Secretary of the Societe Romande d'Apiculture, said it gave him the greatest pleasure to be able to be present, and to thank them on behalf of himself and other visitors present. He said the bee-keepers in Switzerland were greatly indebted to their Chairman (Mr. Cowan) for much information, always willingly given by him at all times personally, and to his writings. He was well known and appreciated by the Continental bee-keepers. He compared the British Bee-Keepers' Association to a large and strong hive that did its work well.

Mr. Horton Ellis also briefly acknowledged the toast, expressing his great pleasure at being present on so memorable an occasion; he added a few words to the effect that he looked forward to the time when an improvement of the honey-bee might take place, by means of judicious crossing of the breeds, possibly the Indian with the Ligurian.

The proceedings in the luncheon-room being adjourned, the guests were conducted to the honey-show in the Exibition, where the magnificent display of Canadian honey, exhibited by 27 members of the Ontario Association, was inspected, there being about forty tons of comb and extracted honey.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows :

For 50 colonies (120 pages)..............$1 00
" 100 colonies (220 pages) 1 25
" 200 colonies (420 pages) 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year? When you do so, please select any 25 cent book in on list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887 —will you not assist us to obtain them?

Local Convention Directory.

1886. *Time and place of Meeting.*

Nov. 24, 25.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

Jan. 25.—N. W. Ills. & S. W. Wis., at Rockford, Ills.
J. Stewart, Sec., Rock City, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Peculiar Action of Worker Bees.—E. E. Ewing, Rising Sun,♂ Md., on Nov. 4, 1886, writes :

Query, No. 331 appears to puzzle the veterans. All bee-keepers have noticed the bees at times "pawing" with apparently much industry on the alighting-board. It occurred to me that they might be trying to clean off the dirt which accumulates in front of the entrance, and smoking the "pawers" in, I washed the black accumulation off with salt and water until the colonies had a white, clean porch in front of their door, when the scraping ceased. I think the industrious, tidy things not finding much to do in the fields, employ themselves in trying to scrub off their front porches.

Good Fall Weather, etc.—W. Addenbrooke, North Prairie,○ Wis., on Nov. 9, 1886, writes thus :

I disposed of my bees down to 67 colonies, about 50 good ones, the balance being below par ; increased by natural swarming to 130 colonies, all of which are in good condition for winter without feeding. My bees have stored 4,000 pounds of comb honey in sections 4½x5 inches, and over 1,000 pounds of extracted honey. About half of my crop I have sold at from 8 to 15 cents per pound. We had a severe drouth near the end of the honey season, which curtailed the amount of the crop. We have had splendid fall weather up to date.

Working on Red Clover.—Joseph Beath, Corning,♀ Iowa, on Nov. 3, 1886, says :

I commenced the season of 1886 with 18 colonies, increased them to 32, took 1,100 pounds of extracted honey, and my hives are now full of honey. I think that my bees are in the best condition for winter that I ever had them. Mr. Doolittle, in his report on page 631, says that his bees worked on red clover that was saved for seed, which is the second crop. Mine did the same thing last year, and even the black bees were on it in numbers. But although the heads were still smaller this year, there was no bees that worked on it. Probably there was no nectar in it. It is true that we cannot have the nectar without the flowers, but I notice that we frequently have the flowers without the nectar. When any of our fraternity have bees that work on the first crop of red clover, I for one should be glad to know it.

Late Swarms, etc.—Wm. Anderson, Sherman,○ Mo., on Nov. 8, 1886, says :

I have reaped a bountiful crop of honey, and my bees never were in as good condition for winter as they are at the present time. On Oct. 10 I had a large swarm of bees, a strange thing for that time of the year. In June I got 3 Italian queens. I introduced one of them, but did not kill the black queen, which I had taken out. I kept her about three days, when I went to see how the new queen was getting along. I found her all right ; but not wanting to kill the black queen I let her fly away. A day or so after I went to see how the new queen was getting along, and to my surprise I found the black one back in the hive, and the new queen gone. I know the new queen was all right, for after the proper time there were some Italian bees in the hive.

Severe Drouth.—B. W. Peck, Richmond Centre,♂ O., on Nov. 6, 1886, gives his report as follows :

I commenced the spring of 1886 with 25 colonies of bees, increased them to 40, and took 1,675 pounds of honey, 445 pounds being in one-pound sections, and the rest was extracted honey. We had a severe drouth here which cut the season short.

Case of Bee-Diarrhea.—H. J. Northrup, Lansingburg,○ N. Y., writes :

I send a box containing samples of bees. Lay them down on a board, place a stick upon their abdomen, stand back and press down, and then tell what ails them. They have been dying in large numbers. I would like to know the cause, and the remedy, if there is any.

[This is a clear case of bee-diarrhea. The fecal mass is a combination of pollen and water, differing in proportion in different specimens. In some of the bees the mass is very watery ; in others quite thick and pasty. Of course I have no chance to even guess the cause of the bees thus gorging themselves and retaining the mass unto death, as I know nothing of the circumstances.—James Heddon.]

Five Thousand new subscribers to the Bee Journal is what we have made our calculations for ; they will come in clubs between now and next spring. Installments are coming every day.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax :

CHICAGO.

HONEY.—It has sold better during this month than at any time since the new crop came on the market. Yet prices are not any higher, sales being made at 11@12c. for white honey in 1-lb. sections. Fancy sections of less than 1 lb. in weight, at 13c. Extracted is unchanged in tone or values, being 5@7 cents per lb.

BEESWAX,—23@25c. R. A. BURNETT,
Nov. 9. 161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows : Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; fancy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@5 1-2c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

McCAUL & HILDRETH BROS.,
34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

Blake & Ripley, 57 Chatham Street.

DETROIT.

HONEY.—Best white in 1-lb. sections, 12@13c.; dark, 10@11c., with a good supply in commission houses.

BEESWAX.—23c.
Oct. 10. M. H. Hunt., Bell Branch, Mich.

CINCINNATI

HONEY.—There is a lively demand for table honey in square glass jars, and the demand for nice comb honey is very good. Demand from manufacturers is slow for dark grades of extracted honey. The ranging prices for extracted is 3@7c. a lb. Nice comb brings 12@15c. per lb. in a jobbing way.

BEESWAX.—Home demand is good. We pay 20@23c. per lb.

Nov.10. C. F. Muth & Son, Freeman & Central Av.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs. 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c.

A. C. Kendel, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.

Oct. 2. A. V. Bishop, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted ; 3¼@3¾c. for amber extracted ; and 9@11c. for comb honey in 2-lb. sections ; darker grades bring 7@8c.

BEESWAX.—It finds buyers at 22@24c.

Sep. 28. Schacht & Lemcke, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.
Oct. 18. O. B. Smith & Co., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¼c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c.

BEESWAX.—Dull at 21c. for choice.

Oct. 21. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand for all grades is good, and sales are large. Receipts are good and prices are steady with a firm feeling. We quote : 1-lb. sections of white clover, 13@14c.: dark, 10@12c.; 2-lbs. white clover, 11@12c.; dark, 9@10c.; Calif. 2-lbs., 9@11c.; ½-lbs. white clover, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5½c.; Calif. amber, 5c.

BEESWAX.—20@22c.

Oct. 15. Clemons, Cloon & Co., cor. 4th & Walnut.

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To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

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When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours. to get subscribers.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Report of the Indianapolis Convention is now published in pamphlet form, uniform with that of last year. It will be sent postpaid for 25 cents to any address.

We have also bound it up with last year's, together with the History of the Society; this we will mail for 40 cents. Or if you send us one *new* subscriber (with one dollar) besides your own renewal, we will present you with a copy by mail.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

To all New Subscribers for 1887 we will present the rest of the numbers for 1886; so the sooner they subscribe the more they will get for their money.

◆

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

◆

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

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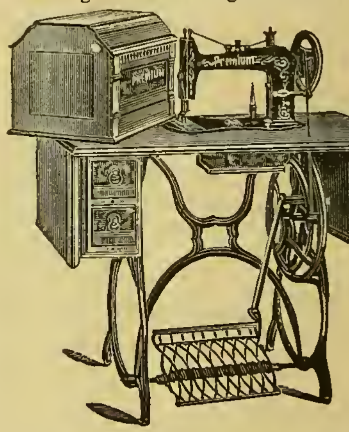

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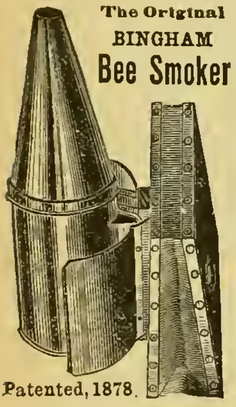

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ADDISON, Vt.—Have one of your smokers good yet—used 6 years.
E. J. SMITH.

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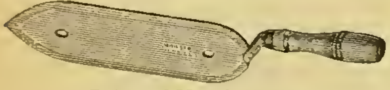

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Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
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Large smoker (wide shield)	2½ "	1 50
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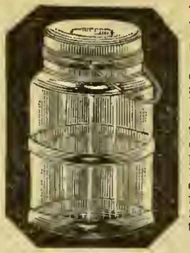

THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen,	$1.60
" 2 pounds " "	2.00
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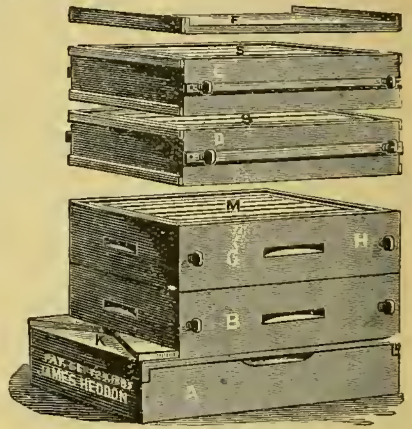
The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Nov. 24, 1886. No.47.

During the Past Week the editor has been quite unwell, and unable to attend to his regular duties. Part of the time his physician would not allow him to leave his residence. This may explain *why* some letters have not been answered promptly.

◆

Prospects for successful wintering of the bees are thus commented upon by Mr. C. H. Dibbern, in the *Plowman* :

> Those who use large hives, and did not extract all the early white honey, will probably come through all right. Owing to the extremely dry summer, the late honey was of a very inferior quality, and we may expect the small hive man, who has extracted all he could get up to August, will be among the mourners next spring.

◆

At the Dallas, Texas, Fair, Mr. J. W. Eckman seems to have made a "sweep" of the premiums. The Richmond *Opinion* of Nov. 5, says :

> In the honey department Mr. J. W. Eckman proves that his system of bee-management is *par excellence*, for he took the whole list of premiums, showing honey in every conceivable shape and form.

The premiums on bees and honey, which Mr. Eckman was awarded, amounted to $52. Surely it pays to excel in the matter of putting up honey for the market, and then to make a good display of it. We congratulate Mr. Eckman upon his progressive management, and the exertions he has put forth to exhibit it to the world.

◆

Mr. R. H. Holmes, of Shoreham, Vt., on Nov. 15, 1886, requested us to note the following announcement. As every other department of the JOURNAL is full, we give it here : "The annual convention of the Vermont Bee-Keepers' Association will be held in Burlington, Vt., on Jan. 13, 1887." The programme is not fully made up, but it is expected that there will be a two days' session.

◆

E. H. Cook, Andover, Conn., has sent us his 28-page Club List of newspapers and magazines for 1887.

Canadian Suit Against Bee-Keeping.—R. F. Holtermann sends to the General Manager of the Bee-Keepers' Union a statement of the case as set forth on page 742, and adds, "I think you will here find a case which should be taken up." He then adds :

> How far we in Canada have supported the Union I know not ; probably not as we should ; but I have seen its utility if properly conducted, and thus far I believe it has been. I sent $1, and am prepared to send another, so I am not ashamed to call for aid.

In reply to this we will say that the Union for the present year has only two members in all Canada—the Rev. W. F. Clarke and G. A. Deadman. Last year there were three, if we include Mr. Holtermann's dollar sent to the defense fund, without annual dues. Mr. Jos. Harrison, the person sued, is not a member, and the only claim that could be entertained at all, would be to prevent the recording of a precedent in the law books of America.

The "only bee-paper in Canada" has never thought enough of the Union to mention "its aims and objects ;" neither have its proprietors ever offered to become members.

Mr. Harrison, in a letter dated Nov. 10, 1886, writes as follows :

> If such men are permitted to obtain injunctions to restrain persons from keeping bees, farewell to bee-culture in Ontario..... I cannot say when the final question will be brought up, but expect it sometime before Christmas. The judge submitted these questions to the jury :
>
> 1. Did nearness of the bees cause discomfort to the complainant in any unusual degree ?
> 2. Did the complainant acquiesce in Mr. Harrison's keeping bees, by allowing him to put 28 hives of bees in his yard before he (Mr. Harrison) found fault with the dirty pig-pen ?

The General Manager is in some doubt whether the Union should take hold of the case in Canada, especially when the apiarist is not a member of the Union. He is now consulting with the Advisory Board, and their decision will be final.

◆

Tasting of a Honey-Bee.—The Hartford *Times* recently contained the following peculiar experience with a honey-bee :

> A Ridgefield farmer has a hired man named Burdick, who, a few weeks ago, was picking up apples to carry to the cider-mill. He came across a fair and ripe one and bit into it for a mouthful, without discovering a hole in it wherein was concealed a bee, which stung him on the tongue. It was painful for a time, and his tongue badly swelled. For two days he suffered from constant nausea, and was scarcely able to eat. The effect then passed off and he forgot the matter. But he is now forcibly reminded of it, for whenever he attempts to eat an apple he experiences the same sensation he did when stung, and if he persists in eating it, his tongue swells and the nausea returns.

◆

J. W. Sanders, of Le Grand, Iowa, has sent us one of his division-boards, which consists of a plain piece of board ¾ of an inch shorter than the hive, with a piece of rubber ½ inch wide at each end to make it up to the width of the hive, and keep it bee-tight. It has an ordinary flat top-bar with projecting ends.

The frame is a regular Langstroth frame with a V-shaped top-bar, with comb foundation about one-half the way down, and a wire run through from side to side, embedded in the foundation to keep it from bulging. Both are placed in our Museum for the inspection of visitors.

The Indianapolis Convention—the proceedings of which we have published, and a notice may be seen on page 748 of this issue—is thus commented upon by our friend, Mr. A. I. Root, in *Gleanings*, for Nov. 15, 1886 :

> REPORT OF THE PROCEEDINGS OF THE INDIANAPOLIS CONVENTION.
>
> The above report is very neatly gotten up. It is a book closely printed, of 32 pages. It is furnished by the AMERICAN BEE JOURNAL for 25 cents. It seems to me the matter contained in it ought to be worth that to any enthusiastic bee-keeper. While I am about it, I believe I omitted to make editorial mention of the proceedings a year ago. I regret this, as it embodied also a history of the North American Bee-Keepers' Society from 1870 to 1884. The price is also 25 cents, furnished by the AMERICAN BEE JOURNAL. This latter book contains 64 pages. While we are looking over these convention reports, I feel moved to say that the editor of the AMERICAN BEE JOURNAL should receive a vote of thanks for the very faithful service he has rendered at different times to this convention, or, so far as I know, at *all* conventions. He is a most excellent reader and speaker, full of good-natured pleasantry and enthusiasm ; and with the experience of the last two or three conventions before me, I for one should feel sorry to find friend Newman absent from any convention I might have the good fortune to be permitted to attend.

Thanks, Brother Root, but we fear we shall not have the pleasure of meeting together at the Michigan State Convention. We regret this, but it is out of our control.

◆

Mons. Leon Jonas, one of the founders and the Secretary of the "Societe D'Apiculteur de la Somme," in the northeast of France, died last January, and on Oct. 12, the President, Mons. Jules Madare, also departed this life. The *Bulletin* of the Society came out with a wide, black border for each, showing the esteem and affection in which they were held by the members. The death of the latter occurred while our international convention was being held at Indianapolis. It is strange that these two intimate friends should have died in the same year ! Both were apiarists of renown, and in their death the apicultural world has lost two progressive and enthusiastic bee-keepers.

◆

The December Number of Frank Leslie's Sunday Magazine closes the Twentieth Volume. The opening article is "A Moravian Village," by Lieut. H. R. Lemly, U. S. A., who describes sympathetically the village of Salem, N. C. Mr. Powell's fifth number of "Leaves from My Life," deals with Lord Beaconsfield, "Barry Cornwall," and Alfred Domett. This Leaf is very fully illustrated. Other profusely illustrated articles are : "Zanzibar, and Mission Work There," etc. There is plenty of miscellany in the shape of short articles and sketches, and several very beautiful full-page reproductions of paintings by well-known artists.

◆

The Union Reading Circle is the title of a new literary journal especially devoted to home study and reading circles ; it is somewhat after the plan of the Chautauquan, but is non-sectarian, and the instruction is intended to be highly scholarly, leading through complete college courses, over fifty distinguished college professors being connected with the enterprise.

Yearly subscription, $1.00 ; single copy 10 cents. Address The Reading Circle Association, 147 Throop Street, Chicago, Ills.

QUERIES
AND
Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Fumigating Comb Honey.

Query, No. 338.—In keeping comb honey until winter, especially if the fall be warm, millers spin their webs on the combs, injuring its appearance—often destroy it entirely. How much sulphur or brimstone must be used to every 1,000 cubic feet of space, and *how* burned or applied?—J. C.

A heaping table-spoonful will be sufficient for 1,000 cubic feet of space. The room should be perfectly tight. The sulphur can be placed on live coals in an iron vessel.—J. P. H. BROWN.

Burn the sulphur in a smoker. We cannot say how much is needed, but it must be used plentifully, and yet not enough to turn the propolis green. Practice in this is better than theory. —DADANT & SON.

I use about one-fourth of a pound to every 2,000 cubic feet. To apply, put some ashes in an iron kettle, and on the ashes place some live coals, then pour the sulphur on the coals.—G. M. DOOLITTLE.

The comb should be hung on frames in a close room, and enough sulphur burned therein to completely fill the room with its fumes. One-fourth of a pound would be sufficient to thoroughly fumigate a room 8 to 10 feet square.—J. E. POND, JR.

In a room 8 feet square I use ½ of a pound of sulphur. Put some ashes in the bottom of an iron kettle, heat an iron "red hot," put it in the kettle, lay on the sulphur, put an iron plate on top of the kettle, hang it in the top of the room; "get out," and close the door. After the sulphur has done its work, thoroughly ventilate. —H. D. CUTTING.

Use one pound of sulphur for 1,000 cubical feet of space. Put some ashes in a kettle, then put in the sulphur, and hang the kettle up near the top of the room. Heat a piece of iron to a white heat, drop it in the kettle and then close the door. Have the honey so arranged that the fumes can gain access to it.—W. Z. HUTCHINSON.

There is no trouble in keeping comb honey in a warm upper room indefinitely if there is no pollen in the combs. The sections should be held up to the sunlight, and those containing pollen placed by themselves and sulphured if need be. Using wide sections and avoiding very shallow brood-chambers will remedy the trouble from bee-bread so that not one section in a hundred will have to be selected out. Bee-bread is as essential in the development of the moth-worm as the bee-larvæ, and no pains should be spared to keep it out of the sections. Very unpleasant results have happened from placing comb honey upon the market containing it.—G. L. TINKER.

I would not use sulphur at all. If I had bees that would allow such work by millers, I would re-queen them by better blood. If I had honey from such bees, I would go over each section and pick out all worms and webs, and approaching cool weather will do the rest.—JAMES HEDDON.

Sulphur is cheap. Use enough to fill the space densely with fumes. It can be done by placing sulphur on live coals, or in a smoker well lighted. We have only to burn our sulphur in a confined space where the combs are placed. The closer the confinement the better.—A. J. COOK.

Try 2 pounds to 1,000 square feet of comb, and if it does not green any of the comb it may be all right. If the room is full of honey I think it will need less sulphur than the same room with a little honey. Put the sulphur in some iron vessel placed in another vessel to make it safe, stick a match in the sulphur and light it.—C. C. MILLER.

The millers do not spin webs, it is the moth-larvæ that spin the webs to protect them from the attacks of bees. If the combs are kept in a light place, and are not suffered to touch each other, and are free from pollen, the moth-worms do not trouble them, so far as my experience goes. In the use of brimstone I burn it in an old pot and just guess at the amount used. Moth-worms do not injure my comb honey when properly managed, its liability to sweat and become smeared being my greatest drawback. —G. W. DEMAREE.

Wintering Bees in a Warm Room.

Query, No. 339.—Can bees be wintered in a warm room in a second story of a house, where it seldom freezes?—Burlington, Wis.

I should not want to try it.—G. M. DOOLITTLE.

Not successfully.—DADANT & SON.

It is possible that they might, but the occasional freezes would not be desirable features.—W. Z. HUTCHINSON.

If the room does not get too warm at times, they can be.—G. L. TINKER.

I know that it has been done in the attic of a house in this town for several years.—H. D. CUTTING.

I see no reason why they could not if the temperature of the room could be kept say at 45° or 50°.—J. P. H. BROWN.

They can, and have been so wintered, and well wintered, but many have been lost in just such places, and when all the testimony is in, it proves such a place inferior to the usual bee repositories.—JAS. HEDDON.

I think no one has ever made a success of it, although it has been tried.—C. C. MILLER.

They could not be successfully wintered in this climate in that way, unless they could fly during warm spells, as they do when on the summer stands.—G. W. DEMAREE.

I have known of such rooms being used with success. So they can be; but I should regard such a place as the very worst in the world for bees in winter.—A. J. COOK.

Possibly they may, but I think it doubtful, unless the room is made absolutely dark. Much will depend upon the degree of warmth, and whether the temperature can be kept nearly equable, and say about 42° to 50°, Fahr.—J. E. POND, JR.

Keeping Bees on Shares.

Query, No. 340.—A gentleman wishes me to take 50 colonies of bees to work on shares, I to furnish the land, hives, foundation, boxes, etc.—in fact to furnish everything, and do all the work, and also market his share of the honey. What share of the increase and of the honey should I get? Or, in other words, what per cent. should I receive for my share?—Defiance Co., O.

Seventy-five per cent.—G. M. DOOLITTLE.

Eighty per cent.—H. D. CUTTING.

About 75 per cent.—J. E. POND, JR

About 75 per cent.—G. L. TINKER.

Seventy-five per cent. would be about right, if you had to incur all the expense and labor.—J. P. H. BROWN.

At least ⅔ of the increase and of the honey.—DADANT & SON.

I think where each furnishes one-half of the hives, etc., each takes one-half of the proceeds. Ask some of the men who let or take bees in this way.—A. J. COOK.

You should have rent for your land, full pay for the hives, and half pay for the foundation, sections and shipping-crates. The honey should be equally divided, the increase to belong to the one who furnished the bees.—W. Z. HUTCHINSON.

It would depend somewhat on the locality. I mean by this, that the rental value of bees would be worth more in some places than in others. In an average location I suppose 66⅔ per cent. would pay you, and would pay the owner of the bees, as he would get ⅓ of the profits for the rent of his bees.—G. W. DEMAREE.

If the bees are now in such hives as will be supplied by you for their increase, I would say that you should have one-half of the surplus honey, and all the increase, you to return the same number of colonies you receive, and at the same time of year, and in equally good condition. The owner of the bees to pay for one-half of the sections and shipping-crates sold.—JAMES HEDDON.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest; O⌐ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Feeding Bees—My Way of Doing it.

G. M. DOOLITTLE.

I am requested by two or three to give an article in the BEE JOURNAL on the above subject, and although I have objected on account of the article appearing out of season it is of no avail, for they say, "Now that we are interested we desire it, and can remember it." While an article is more appropriate a little in advance of the time required for its use, yet I am ready to admit that it is often the case that an article on some phase in bee-keeping, appearing just after a person has had a trial of that very same thing, sinks deeper into the memory and does more good than it would had it come at the appropriate time. As many of us here at the East have just passed through a siege of feeding for winter, of course the matter is still fresh in our minds, and anxiety regarding this matter still exists, so I will comply with the request, hoping that even those not specially interested may find something of value in it.

In the first place I wish to say that it is always well to look out in advance for times of scarcity, and during the honey-flow lay aside a good supply of nice, sealed, well-ripened honey in frames for use in the fall in supplying any deficient colonies which we may have. I know of no nicer way of feeding than this, hence I always try to keep a supply of such combs on hand. If they are not needed, the honey can be just as well extracted from them (by placing them in a room kept at 100° for four hours before extracting) in December as in August, so that no loss need occur if such combs are not used for feeding. On the contrary a gain is made, for the bee-keeper's time is not nearly so valuable at this season of the year.

If, however, no such combs of honey had been saved, we must resort to sugar feeding, unless we have plenty of extracted honey, which is not supposable, for certainly it is a great waste of time to extract honey for the fun of feeding it back again.

There are two ways of feeding bees sugar, one of which is to make the sugar into candy, the cakes weighing from 1 to 10 pounds, according to the desire of the apiarist. I generally make them of about 5 pounds each, and find it a very convenient size. To best get it in the form I wish it, I make a frame of the size and height I wish, which is usually about 8 inches square, and 3 inches high.

I now make little mounds of sawdust on a bench, raising them about 1 inch high at the highest point. Over this mound is placed a piece of newspaper, and on the paper the frame which is to receive the candy. This frame should be held secure by a weight or some other means, so it cannot raise up and let the candy run under it.

Having the candy boiled to the right consistency (which is known by taking out a little and stirring it while the rest is partially drawn from the fire so it will not cook too fast while you are testing it, so as to get the start of you), stir it until it is as thick as it will run, when it is rapidly poured into the frames and left until cold. Now lift the frame of candy and pull off the paper from the bottom, when it is ready to put on the hive, so placing it that the centre of the cluster of bees will come into the middle of the convex place in your candy, for this place was made for the bees to cluster in so that as many as possible can reach the candy. In this way the moisture from the bees during cold nights collects on the candy, which moistens it to such an extent that the bees can lick it up, thus giving them a supply of food.

I find, however, that during an extreme cold spell, if there is nothing but candy in the hive, the bees may fail to cluster on it and starve, therefore, I use this only in connection with a few pounds of honey in the hive, when it always works nicely. I especially like such cakes of candy in February and March, when there is a prospect of the bees getting short of of stores.

The second plan, and the preferable one is, to make the sugar into a syrup which is fed to the bees during the warm days of September and October, so that they can store it in the combs and cap it over the same as honey. To make the syrup I find the following formula the best, after trying nearly all the different ways recommended: Put 15 pounds of water in a vessel that will hold about 24 quarts, and bring it to a boil. When boiling, slowly pour in 30 pounds of granulated sugar, stirring it as it is poured in, so it will mostly dissolve instead of settling to the bottom and burning. Now bring it to a boil again and skim it, if impurities arise, when it is to be set from the fire, and 5 pounds of well ripened honey stirred in. This gives 50 pounds of feed which will be of as much value to the bees as 50 pounds of honey. The honey is put in to prevent crystallization, and with me proves far superior to vinegar or cream of tartar.

As soon as the syrup is cool enough so you can hold the hand on the outside of the tin dish containing the syrup, it is ready for the bees. This feeding syrup warm has especial advantage where the nights are cool, and by having it thus warm quite satisfactory work at feeding can be performed as late as November.

Where a person has not the feeders or the time to prepare them, the best thing to use for such a purpose is a common milk-pan. Set this on the top of the hive and fill it with syrup, or give the desired amount, after which pull off two or three handfuls of grass and scatter it over the syrup for a float; or use shavings or corn cobs, as is preferred. The trouble with these latter is that they soak up much of the syrup, while the former does not.

Set up a small piece of board or a chip against the side of the pan, so the bees can easily climb over to the feed, when a hole is to be opened to the hive below by turning up one corner of the quilt or removing a slat in the honey-board for the bees to come up through. Now scatter a few drops of feed down through the hole and over the chip, and put on the cover, seeing that the joints are all tight, so that no robber bees can get in. However, if a person has time at his command, feeders made as follows will prove much more satisfactory; I have used such for four years, and never had anything in the feeder line which pleased me so well, and I have tried nearly all the feeders in use:

Get out two pieces of wood, having them the size of your frame except less ¾ inch at the top, and ¼ inch thick. Nail those on each side of a frame, fitting the joints together with white lead, so as to prevent leaking. If after making, hot beeswax is run all over the inside, there is no possibility of leaking, and all soaking of the feed in the wood is prevented also. Bore a hole in the top-bar to the feeder for a funnel, and your feeder is ready to be hung in the hive the same as a frame, where it can be left when not in use, if desired.

To feed, cut a little slit in the quilt to correspond with the hole in the top-bar of the feeder, through which the point of the funnel is to be inserted and the feed poured in. When the funnel is removed the slit in the quilt closes up so that no bees can get out to annoy the operator. As the feeder is only an inch wide there is no need of a float, as the bees can easily reach either side, so none stick fast or drown. By using two or more feeders to a hive the winter supply can be given at once, or the bees can be fed for stimulation as slowly as is desired.

Borodino, ⊙ N. Y.

For the American Bee Journal.

A Bee-Lawsuit in Canada.

WM. F. CLARKE.

Bee-Keepers on this side of the line have been suddenly waked up from their dream of false security, by a lawsuit, the result of which, so far as it has gone, conclusively shows that we are as benighted and ignorant here in Her Majesty's dominions as are our neighbors in the United

States. At the Assize Court in Walkerton, Ont., a few days ago, a case was tried before Judge O'Connor, in which a blacksmith named McIntosh, of Southampton, applied for an injunction to restrain his neighbor Harrison from keeping bees. It appears that Harrison keeps about 80 colonies of bees. McIntosh's complaint sets forth that they are a great nuisance, flying all over the neighborhood and stinging people, and that they are an especial annoyance to the plaintiff, flying about his shop and stinging horses. They were also very troublesome around the house when preserves were being made, swarming about the kitchen in large numbers.

The jury brought in a verdict that they were a nuisance, and that the plaintiff was entitled to an injunction. Judge O'Connor said it was a novel case, and he would not grant the injunction, but reserved it for argument in the full court. The case was keenly contested, the trial occupying more than a whole day. A large number of witnesses were examined, many of whom were brought from a distance by the defence. As the Judge has referred the matter to a full court, declining to act on his own individual responsibility, this case when decided will have all the weight of a precedent, and we shall know the legal *status* of bee-keeping in "this Canada of ours." As yet the press has not discussed this matter to any extent, the only article on the subject which I have seen being the following from the *Montreal Witness* of Nov. 10, which I think is worthy of being reproduced in the AMERICAN BEE JOURNAL as a disinterested and impartial utterance on the subject:

"Is bee-keeping a public nuisance? An Ontario jury, after listening to the evidence of some neighbors of a man who keeps 80 colonies, has decided that it is, and that the neighbors are entitled to an injunction restraining the man from keeping bees. The Judge who presided over the court has declined to grant the injunction, but has reserved it for discussion before a full court. This was, doubtless, a wise course, as bee keeping has always been considered a most commendable business enterprise which should be encouraged. If it is to be adjudged a nuisance because the bees interfere to some extent with the comfort and convenience of the neighbors, then an industry which has been rapidly growing in Canada will receive a decided check. Bees wander miles from their hives, so that bee-keepers would, if this decision is enforced, have to reside in solitude. The Egyptian bee-keepers, who keep their hives on boats which they move up and down the Nile in search of pasture, calculate that the bees pasture within a radius of nine miles. In Europe bee-keeping is encouraged in many States. Russian peasants use the honey instead of sugar, and the Russian State Church uses so many tapers that enormous quantities of wax are needed for that purpose alone. Germany goes so far as to pay teachers to travel about through the rural districts and teach the best methods of cultivation; and common school-masters have to pass an examination on the subject before they are granted diplomas. The British Bee-Keepers' Association, established under the presidency of Sir John Lubbock, is a vigorous society which has received much encouragement in Great Britain. It must be confessed, however, that when the neighbors go in constant fear at all times of being stung by bees, and are frequently stung and disturbed in their business by bees, there is reason to regard them as a nuisance, and a jury would probably return such a decision every time. Most bees are better behaved, however, and we can find no record of a similar action at law complaining of bees as a public nuisance."

The *Witness* would have made a strong point had it stated that the Ontario Bee-Keepers' Association has been recognized by the Provincial Government as having charge of an industry worthy of being fostered by a grant from the public chest to the extent of $500 a year. It would be a queer anomaly for the Government to subsidize what the judiciary declared to be a nuisance. I shall not be surprised, however, if the upshot of this affair is the exclusion of apiaries from the corporate limits of cities, towns, and villages. A strong feeling is growing up in this direction, as our friend Hall, of Woodstock, and others can testify. So far as there is reasonable ground for making complaint, bee-keepers must be prepared to give due consideration to the rights and interests of the community at large. Personally, I shall not wait for any lawsuit, but whenever evidence is adduced that my bees are a nuisance and annoyance to my neighbors, I shall move them a safe distance.

Guelph, Ont.

[See remarks on page 739.—ED.]

For the American Bee Journal.

The Elements of Fat, etc.

A. J. COOK.

With no unkindness in my thought, may I suggest that Mr. Cushman should either study up this whole question more thoroughly or else be much more guarded in his quotations? What I say is this: Nitrogenous tissues may be *robbed of their* nitrogen and further changed—into fat. This is proved by disease where fatty degeneration occurs. *I do most certainly deny* that the greatest part of muscle is nitrogen. Muscle is mainly myosin, a proteid substance. These substances —albuminoids—all contain from 14 to 18 per cent. nitrogen. According to our best analysis the average proportion is about as follows: Carbon, 52.8 per cent.; hydrogen, 7.1; nitrogen, 16.6; oxygen, 22.1; sulphur, 1.4 per cent. Thus we see that all albuminoids contain a large amount of carbon, oxygen, and hydrogen, the elements of fat.

While nitrogenous material may be transformed into fat, nitrogen can never be, as fat has no nitrogen, nor has nitrogen any of the elements of fat. Hibernating animals can live on fat, as in their inactive state the waste is so slight that the organs are not seriously impaired, though there is no nitrogenous food to build them up. That is why our bees are better off with no pollen. They are very quiet, waste is very slight, so the body is better off if there is no hearty albuminous food to digest. I do not reason that all organic food may be converted into fat. I do argue, and with truth, that all organic food may minister in the economy of the body to the formation of fat. All organic food does not mean the inorganic salts or water, but only the carbohydrates, fats, and albuminoids.

How much there is in a word. I say, "We have seen that stored fat in animals that hibernate, and in case of disease, will alone keep up the nutrition—*not* nitrogen.* The first is truth; the latter absolute absurdity. It is possible, nay probable, that there may be slight waste of tissues, but owing to the inactivity this is almost nothing, else albuminous food would be required. So we ought to keep our bees in as quiet a state in winter as possible. Then the waste is so slight that no nitrogenous food—pollen—is required.

Before I studied the subject I supposed that bees actually hibernated. Now we know that they do not; but if we can so reduce activity that they will feel no need, and so not seek or take pollen, we shall solve the winter problem. I *wish* to have my bees all winter in a room of about 45°, Fahr., then with good honey or syrup I shall have no fear, even if pollen be present.

Agricultural College, ♀ Mich.

[*Mr. Cushman wrote this word nutrition, but by an oversight it was printed nitrogen.—ED.]

For the American Bee Journal.

Legislation for Bee-Keepers.

DR. C. C. MILLER.

At the meeting of the North American Bee-Keepers' Society at Indianapolis, I was appointed one of a committee of three to inquire into the desirability and feasibility of obtaining certain legislation looking to the securing of bee-keepers in their locations as to territory. In order that we may make an intelligent report at the next meeting, it is essential that we obtain all the information possible in the interim. One way is to obtain the views of the bee-keepers, and probably the very best way to do this is through the medium of the bee-papers. I cannot speak for the other members of the committee, but I think I am not assuming too much to say that we shall be glad to get light from any and every one.

When the resolution was first offered in the convention, it was received with very evident disapprobation. A little reflection, however, brought out the feeling that the matter was at least worth inquiring into, and I believe in the final vote there was not one who voted against making such inquiry. Can we not get at the truth in a dispassioned way? If any one sees anything not desirable or feasible in the legislation under consideration, let him state his objections with all the force at his command, and let him state with equal force whatever may favor the opposite view.

I have had no conference with the other members of the committee, but I shall be glad to see their views publicly expressed, and even if their views are diametrically opposed to my own, I shall take it in the most kindly manner.

I want to thank Mr. James Heddon for giving his view on page 709. I am looking for the views of Mr. N. N. Betsinger, who expressed himself as having decided convictions on the subject, somewhat, I believe, on the line of Mr. Heddon, although I did not get his reasoning.

When it comes to the matter of legal enactments, our legal brethren are the ones to whom we naturally turn at least part of our inquiries. Will they not help us out? At the time the matter was up in convention I am not sure there was any lawyer present except Mr. R. L. Taylor, of Lapeer, Mich. That gentleman, in his usual candid manner, deprecated any hasty decision, and I would very much like to see his views in full.

As to my own views, I have expressed myself as at present believing that such legislation is both desirable and feasible, yet I am quite open to conviction, and it is altogether among the possibilities that a year from now I may have decided views against the desirability or the feasibility of any legislative action.

I understand Mr. Heddon to claim on page 709 (I am sorry I cannot lay my hand on the previous number to which he refers), that the prior occupant has a natural exclusive right, and that such exclusive possession would result in the greatest good to the greatest number. In this we are very nearly if not altogether in accord, certainly I am in full accord with him as to the last part of the proposition. Just how he reconciles the idea of "a natural exclusive right" of the prior occupant, with the "survival of the fittest," I do not readily see. If I understand what is usually meant by the "survival of the fittest," it means a struggle for existence; and if I have "a natural exclusive right" to the territory I occupy, why should I be compelled to make a struggle for existence in that territory every time some interloper should decide to settle down beside me. Moreover, if the other fellow should happen to be the one to "survive," where would be my natural right?

However much thought Mr. Heddon may have given to the matter of rights as to "priority of location," I cannot believe he has given much thought to it with the possibility of legislation in view, but it seems to me that without much thought upon that branch of the subject, he has hastily settled upon the conclusion that because there was no legislation there could be none, and in that view of the case it is no doubt the proper thing to consider, as he has done, how best to make the struggle to maintain those rights for which, if all men were right-thinking, we would never be obliged to make any struggle.

I have merely touched upon the subject, believing that its importance demands much fuller mention, but space forbids. I hope to hear, as I before said, the views of others, and just as much desire their views whether they agree or disagree with me. So long as I believe as I do now, I will make the best fight I can, and if vanquished I will thank the victor for setting me right.

Marengo, Ills.

For the American Bee Journal.

The Western Convention.

The Western Bee-Keepers' Association met in annual session in Pythian Hall, at 10 a.m., in Kansas City, Mo., on Oct. 27 and 28, 1886. After having an informal experience meeting, which, of course, was principally on bees and honey, the convention adjourned until 1:30 p.m.

AFTERNOON SESSION.

At 1:30 the convention was called to order by the President, Mr. E. M. Hayhurst. The election of officers was postponed until the next day. The following discussion then took place:

"How has the drouth affected the bee-business this season?" It was generally conceded that the bees gathered little if any honey after the middle of July in this vicinity. A. A. Baldwin said that we would feel the effects of this year's dry weather more next year, as the white clover had died out badly. Mr. Leahey did not find the drouth very bad for his bees. J. A. Nelson said the same, as the honey season was about over before the very dry weather had commenced. B. F. DeTar said that the bees were not much affected by the dry weather. President Hayhurst said the drouth was bad for queen-rearing, but had not hindered the gathering of honey very much.

"What is honey-dew, and where does it come from?"

Some said from insects, bark-lice, aphides, etc. Mr. Hayhurst thought that some came from punctures in tree-bark on the hackberry or ash, made by borers, as he had seen a sweet substance that oozed out and formed icicles in appearance during the night, that tasted very much like good grape-sugar, and the wasps, yellow-jackets and bees worked on it very much during the day. A. A. Baldwin said it sometimes came out on acorns that were punctured by some insect. Mr. King had seen it on the leaves, and it tasted sweet. He said that it was not the kind made by bugs that he had tasted. Mr. Conser had seen it higher up than any other man, on the top leaves of every thing, and had looked with a microscope and could not find any aphidæ.

"How can moths be kept out of honey in sections?"

A. A. Baldwin — Fumigate the honey with sulphur, which will kill the worms and millers, but not the eggs. When more eggs hatch, fumigate again. The honey is not apt to be bothered by moth-worms unless there is some pollen in the combs.

Some thought that the moth-eggs were laid in the combs, or near the hive entrance, and unintentionally carried in by the bees; others, that the bees got the eggs from the flowers when gathering pollen; and still others, that the eggs were hatched near the hives outside, and the worms crawled in.

The marketing of honey was much discussed, but no definite conclusions arrived at. How to get the sections finished up and to prevent too much increase at the same time, was discussed as follows:

A. A. Baldwin would return the swarms and keep the bees crowded as much as possible. P. Baldwin would get more honey from the old colony, and the increase by natural swarming, keeping only the first swarms out. Jno. Conser was of the same opinion.

"What causes bees to mix up and go into the wrong hives?"

The author of this question had his hives about 3 feet apart, which was considered too close; the best distance apart for hives being about 8 feet each way, as that would also allow room to use a scythe in cutting the weeds and grass in the bee-yard.

"Does ventilation retard swarming?" Mr. Leahey and Mr. Conser said it did. A. A. Baldwin thought it did, but it was too much extra work.

At 5 p.m. the convention adjourned to meet again on the following day at 10 a.m.

SECOND DAY.

At 10 a.m. on Oct. 28 the convention was called to order by President Hayhurst. The election of officers being in order, the following were elected by acclamation for the ensuing year: President, E. M. Hayhurst, of Kansas City, Mo.; Vice-President, R. B. Leahey, of Higginsville, Mo.; Treasurer, J. H. Jones, of Buckner, Mo.; Secretary, Jas. A. Nelson, of Wyandott, Kans.

The President appointed L. W. Baldwin and C. F. Lane a committee to present topics for discussion, which were presented and discussed as follows:

MARKETING HONEY.

"What is the best method of sustaining profitable prices for our products?"

Mr. Leahey said that it was best to educate the people in the use of honey; that it is a good thing to have in the house to use as food and medicine.

Mr. Lane would induce manufacturers to use extracted honey, such as confectioners, cracker factories, pork-packing establishments, etc.

President Hayhurst said that giving Leaflets, detailing the uses of honey as food and medicine—one or two with each package of honey retailed—would help very much to educate the people in the use of honey.

Mr. Conser had sold about 800 pounds of extracted honey profitably by taking a 20-gallon can in his wagon, and filling the can about three-fourths full of nice extracted honey; then putting in about 40 pounds of nice comb honey cut from unfinished sections, such as were three-fourths full, and up to those not quite finished, then going around to the houses and selling by weighing it out in any quantity to suit the customers. As to comb honey, if he could not get a profitable price for it, he would take it home and hold it for a higher price.

P. Baldwin would hold his honey for the higher prices, but thinks that we could not get 2 or 3 cents per pound more than others do in the same market.

Mr. Lane said that some of the commission men seemed to make it a point to run down the prices when it was not necessary to do so. This opinion was concurred in by many.

L. W. Baldwin thinks that to co-operate, find out the amount of the honey crop in the whole country, and work together accordingly, also to give samples of honey and Leaflets at each house—to work up a home market in that way, would help very much to sustain profitable prices.

President Hayhurst said that it would be well to advise honey producers, through the bee-periodicals, not to ship honey to commission houses indiscriminately, as some seem to be doing, but to send and get prices first, and then ship to the best market, or where they could realize the best prices.

REVERSING HIVES, FRAMES, ETC.

Jno. Conser—Reversing sections is advisable to get the combs built out full to the wood all around, and reversing brood-combs to get the honey moved to the section-boxes; but it must be done at the right time and properly, or it is bad practice.

Mr. Leahey had tried reversing the lower stories of hives, and found it a bad practice, as those let alone did very much better. His neighbor had also tried it, and found it unprofitable.

President Hayhurst reported that Mr. Hill thought it was of no use except to get combs built out to the bottom-bars, which is not needed if any one will properly use wired frames filled with foundation, when the combs will be completed to the wood all around, not even leaving a hole, and every comb as straight as a board; and, what is best of all, the cells will be all worker size, so that but few drones are reared, and in some hives none are reared.

Mr. Lane thought it valuable only to get the combs in sections built well to the wood, which is much easier and quicker done by crowding the bees properly.

A vote was then taken which resulted in a resolution being carried unanimously, that it is not practical to reverse hives, frames, etc.

The next subject was, "Our Neighbors."

Mr. Gates said that wasps and some insects sting or break the skin of grapes, but the honey-bees never do either. The sting of the honey-bee is used only in defense, and they cannot bite a hole in a grape, as has been demonstrated many times; on the other hand the honey-bees are a great benefit to the fruit-grower in fertilizing the blossoms so that the fruit will set properly, and the product be abundant, as he had proven to his own and his neighbors' satisfaction in a field of buckwheat, which produced more than any other field within 7 or 8 miles of his bees.

Mr. Conser, who is a farmer and fruit-raiser, said that the bees are a benefit to all fruit crops, and will not eat grapes until the grapes are broken and begin to ferment.

Mr. Leahey would keep his bees where the neighbors are few, and thus the trouble would be reduced to the minimum.

Mr. Gates said that we should defend our bees. The mission of the honey-bee is to gather up the sweets that would otherwise be wasted. They do not injure grapes in any manner or form, and only eat those that are not marketable, and of no use to any one.

A vote was then taken, and it was unanimously thought that honey-bees do not injure flowers or grapes.

"Can the town council legally cause the removal of bees to the outside of the corporate limits of any town or city?"

L. W. Baldwin said that they had tried it in Independence, Mo., and had found no law to have them moved.

Mr. Conser said that bees are a nuisance only as flies are, and can be kept out of houses by proper screens on the windows and doors.

WINTERING BEES.

A. A. Baldwin said that the best method is in the cellar, and is less expensive, but he does not think that it makes much difference.

L. W. Baldwin—The best method is cellar wintering. Colonies in the cellar consume only from 3 to 4 pounds each, while those outside packed on four sides and on top consumed 6 pounds each; and those packed on two sides and on top, out-of-doors, consumed 8 pounds each the past winter. All wintered well. Those in the cellar were ahead at swarming. It is easier to carry bees into the cellar than to pack them out-of-doors.

Mr. Gates said that it would cost $500 to build a cellar to properly winter 200 colonies of bees, which should be considered in the expense. He had experimented some, and those wintered on the summer stands swarmed first, or before those wintered in the cellar.

The hour of noon having arrived, the convention adjourned till 1:30 p.m.

AFTERNOON SESSION.

At 1:45 p.m. the convention was called to order by the President, the other 15 minutes having been occupied in examining a surplus arrangement exhibited by Mr. G. W. Cook. The subject of wintering bees was then continued as follows:

Mr. Thorne winters part of his bees in the cellar and part of them out-of-doors. He prefers out-of-doors, but would rather have the cellar for safety.

Mr. Leahey has tried the cellar, but the bees swarm out and spring dwindle so much after they are put out on the summer stands. If he had a good cellar he thinks he would use it, but he would not go to the expense of building one expressly for the purpose. He has a cellar 5 feet in the ground and 1 foot above, cemented on the bottom and sides all around, with a tile pipe underground, and a pipe up to the outside for ventilation.

L. W. Baldwin has a cellar 19x25 feet, and 7 feet deep, that cost $250. It is under his house, and large enough for 300 colonies. He could put in 400, but he thinks it would be too warm for so many in a mild winter. He never has any trouble with bees swarming out or deserting their hives in the spring when put on the summer stands. He says that the bees will mix up somewhat when taken out of the cellar if no landmarks, such as trees, grape vines, etc, are not in front of some of the hives. He has tile laid underground 150 feet long to bring a mild air into the cellar.

Mr. Conser winters his bees both in the cellar and out-of-doors, but he prefers wintering them out-of-doors.

A vote taken resulted in 7 for and 5 against wintering bees on the summer stands, the other members being undecided, or not having any preference.

FOUL BROOD.

L. W. Baldwin gave his experience with it when he lived in New York State several years ago. To cure by the starvation plan is the only way he knew of. Some of the very worst cases he cured by burning hive and all.

Mr. Lane had, a few years ago, in his apiary in Wisconsin, what appeared to be foul brood, and it cured itself after he had ceased exchanging combs from one hive to another.

A. A. Baldwin thinks it only affects the larvæ; that if bees gather impure water and feed the larvæ with it, it will cause foul brood he thinks. He has burned some colonies, and others cured themselves.

It was moved and adopted that when the convention adjourned it should adjourn until the spring meeting; and that our next semi-annual meeting be held in Kansas City, Mo. Mr. Hayhurst and Mr. Otto were appointed a committee to secure a hall and furnish a programme for that meeting.

A committee of ways and means was appointed, on the suggestion of the Secretary, which resulted in a motion being carried that each member pay into the treasury the sum of 50 cents.

RENDERING WAX.

Messrs. Otto, Hayhurst, and Conser each explained how their solar wax-extractors were made, and the working of the same. Mr. Hayhurst said that wax would harden at 90° or less, before it cakes; or, in other words, it will not form into a cake unless it is warmer than 90°.

Mr. Thorne insisted that it takes pressure to get all the wax out of old combs, and have them well warmed up at that. He thinks that a cider-press does the work properly.

Mr. Leahey washes the cappings, making vinegar of the water, and melts the wax by steam.

"Is it best to produce comb honey over new colonies with new combs, or over old combs?"

Mr. Conser could see no difference.

A. A. Baldwin said that produced over new combs is two shades lighter than that produced over old combs.

L. W. Baldwin thought that bees colored or soiled the honey in sections by traveling over the old combs to reach the sections. Mr. Gates and Mr. Thorne thought the same. Others thought the bees ought to be taught to wipe their feet before going into the sections, using a door-mat honey-board.

"Is it best to use combs in the sections, that were built out full in the sections the year before?"

Mr. Conser said that it induces the bees to go to work sooner in the sections in the spring and fall, but otherwise he does not think well of it. Mr. Lane favors it somewhat.

L. W. Baldwin is completely sick of using any more old combs in sections or any old sections, as it will pay better to throw them away completely if more than about half built out.

J. A. Nelson would melt all old combs in the sections if more than half built out, and burn the sections. If we want to get all first-class honey, although we may not get quite so much honey, it will be of a better quality and bring more money than the larger quantity would in old combs and sections that were carried over.

EXTRACTED HONEY.

President Hayhurst would extract the honey when about two-thirds sealed, or even more. The longer the honey stays in the hive the better it is until it is thoroughly ripened. He thinks it still ripens after it is all sealed, if left on the hive, which opinion was generally concurred in. Extracted honey will granulate, and customers want it liquid. He keeps some melted at all times to supply the demand.

STORING COMB HONEY.

L. W. Baldwin built a house 12x16 feet, and 10 feet high, two windows curtained, the room ceiled all around and overhead, and he thinks it would be better if it was plastered. He intends to paper it with heavy paper inside in the spring. Such a room will not do for severely cold weather, as freezing will crack the combs and cause them to leak. His room has screen windows and doors. Comb honey should be kept in a dry, frost-proof room, but not in a cellar, as it will draw dampness.

Mr. Thorne, who seemed to be the only one who had any Carniolan bees, said that they are quite different from the brown bees in appearance. He does not think that they are much better than the Italian bees. They are hardier, fly earlier and later in the day, but he has not had enough experience with them to speak very positively in regard to the matter. It is quite easy to distinguish them from the black bees.

No one present had tried open-side sections, but Mr. Coleman had seen some in the city which came with crated honey from Iowa. He thought that the honey appeared to be better built out to the wood than the other sections were generally. We have honey produced in the neighborhood that cannot be excelled for perfection in all points, and not in open-side sections either.

The statistics of the honey crop for 1886 were taken, and 20 members represented 1,290 colonies, spring count, and 2,028, fall count; 59,290 pounds of comb honey, and 30,135 pounds of extracted; and 598 pounds of beeswax. The largest amount reported was that of L. W. Baldwin, being 18,000 pounds of comb honey from 212 colonies, spring count.

The convention adjourned at 5 p.m. until the spring meeting, the time to be arranged by the executive committee. JAS. A. NELSON, *Sec.*

For the American Bee Journal.

The Taste and Odor of Honey.

J. P. H. BROWN, M. D.

Prof. A. J. Cook, in answer to Query, No. 313, on page 613, says: "I think this matter needs investigation. I should look about and see if some one had not been careless with the peppermint bottle. We have large peppermint plantations in Michigan, and I have never heard such a statement here."

I do not wish to contradict or take issue with Prof. Cook in regard to the flavor and odor of the honey from the Michigan plantations of peppermint; for the location, the atmosphere, and the soil may be such as to prevent the mint-aroma from being apparent in the honey; but from an experience of 30 years of close observation of melliferous plants and their nectarious secretion, I take the affirmative of the question, and contend that *there are localities* where the honey not only takes its flavor and odor from the flowers from which it is gathered, but it also does, to some extent, imbibe the medicinal and toxical (if any) properties of the tissues of the plant.

The study of these questions can be more successfully prosecuted in a country where there is a variety of honey-producing plants in sufficient quantities to afford the respective varieties of honey large enough to enable the experimenter to arrive at correct conclusions. Therefore I shall confine my remarks to the honey produced in the South. In this respect our Southern country is rich in such plants, and my data are drawn from familiarity and experience in handling such honey. Hence, in this matter theory is entirely laid aside, and only naked facts presented.

To prove that the flavor and aroma of honey is dependent upon bloom, I will cite the horse-mint honey of Texas—the goat-mint of Florida and Georgia. In this honey the mint-odor of the plant is very strong, so strong that it is unpalatable to many persons. The poplar honey of the South—from the tulip tree—when first gathered is rank with the perfume of the flower. While it gradually loses its rankness, there is always sufficient left to distinguish the bloom. The same is true of the honey of the bay—*magnolia glanca*. It is stamped with the odor of the bloom, and its flavor is accordingly individualized. Some kinds of plants impart their odor and flavor more lastingly to the honey than others. After honey granulates and is again reduced to a liquid condition, the original odor and flavor is to some extent lost. But all this does not affect the truth of the proposition in question.

That some few plants impart to the honey, besides the flavor, their medicinal and toxical properties is a fact, although denied by a few apiarists whose observation only extends to the familiarity with honey gathered from a few plants, such as white clover and basswood, and probably a few others. Illustrations: *Helenium tenuifolium* (I have heard it called dog-fennel by some persons, but it belongs to a different order of plants. Dog-fennel is another thing.) is a weed, supposed to be an exotic that is found in places in the South along roadsides. It commences to bloom about the first of August, and keeps on until frost. The leaves have a bitter nauseating taste, and the extract, in the shape of tea, was used to some extent during the war as a substitute for quinine in the treatment of chills and fever. The old fields in my neighborhood are covered with it, and in some seasons considerable of this honey is gathered. It is as bitter as the plant, and possesses all the medicinal properties. Of course I cannot sell it, but it does for breeding purposes.

The yellow jasmine (*Gelsemium sempervirens*) is a climbing, trailing vine which grows in many portions of the South. Thousands of these vines grow within a radius of a mile of my apiary. It has a yellow, trumpet-shaped flower which blooms in February and early March. The whole plant, including the flower, is poisonous. A few years ago a neighbor of mine lost a child that was poisoned by chewing the flowers. It died with all the symptoms of gelsemium poisoning. The honey possesses all the toxical properties of the tissues of the plant. Fortunately it is only in rare seasons that it yields honey to amount to much. It comes so early that what little is gathered is consumed in breeding, to the detriment of the young bees. The effects of this honey, when eaten, are so well known by old bee-keepers living in localities where this vine abounds, that they will never take nor eat any spring honey gathered before April. The writer knows of six cases of poisoning by eating yellow jasmine honey, within the last four years. By the way, I will remark that bees do not take to the bloom of this vine if there is any other forage at the same time. I might name some other plants to prove the truth of the proposition, but I deem it unnecessary.

It is well here to remember that among the vast number of honey-producing plants, we have less than a half-dozen that secrete nectar of a deleterious quality; and nature has most wisely set limits to this function by either causing them to bloom at an unpropitious season, or by making their bloom uninviting to the bees, or by curtailing the honey to the smallest possible amount.

When selecting honey for medicine, and studying its therapeutical properties, due reference should be paid to the curative qualities of the plants from which it is gathered.

Augusta,○+ Ga.

For the American Bee Journal.

Do Bees Exercise to Keep Warm?

G. W. DEMAREE.

For several years I have noticed in the columns of the AMERICAN BEE JOURNAL, and other apicultural periodicals, expressions like the following: "When the temperature goes down to a point dangerous to the lives of the bees, the bees begin to exercise to raise the temperature in the hives, etc." Of course I do not pretend to quote from any one writer, as I do not know who is entitled to the *honor* for making this wonderful (to me) discovery. If it is true, it is one of the greatest phenomena yet discovered in connection with the natural history of bees, because such a phenomenon is at variance with all we know about the effects of low temperature on the animal system.

Who ever knew bees to exercise when they were cold? Where and under what circumstances? Was it in the cellar or on the summer stand? We want light on this subject? That bees may sometimes "roar" when the temperature goes down, in the confines of a cellar, does not prove anything. There are other causes present under such circumstances, such as bad air, a change of ventilation, etc.

I have had this matter under observation for the past three winters, and I have visited my apiary in the daytime, and in the still hours of the night, when the temperature ranged from the freezing-point to 10° below zero. On the morning of Jan. 17, 1884, the mercury went down to 20° below zero; my bees were in single-walled hives without any protection, except a few colonies that were in chaff hives for experiment. Last winter will be known in the future as "the cold winter." The temperature remained below zero for four days and nights consecutively, something entirely out of the usual order of things here. Well, at such times, day or night, when I stood among the hives, the stillness was oppressive, like one standing alone in "the city of the dead."

If bees ever "rouse themselves and exercise" to counteract the effects of a falling temperature, and then suddenly discover that they have done so at the expense of "waste of tissue," and like the wise, calculating physician, look about them for that potent remedy' "nitrogen," to restore the waste tissue, why, I admit that they are exceedingly wise, and fully as sly as wise, for their slyness has baffled all my patience and skill to detect them in the overt act.

I know by practical test that bees can endure intense cold for a short period of time, if they are compactly and quietly clustered, and that the lower the temperature sinks the more nearly the bees approach the true hibernal state. And I know by practical test that if the cluster is broken up at such times, the bees do not have the energy to move even a few inches to regain the cluster, though their lives depend upon their doing so.

While feeding bees broken comb honey in the upper stories of hives, late in the season, I have frequently lost bees by their becoming chilled and not having the energy to return to the cluster. Experience and observation have taught me that cold—low temperature—has a peculiarly depressive effect upon the system of bees, common to all insect life. That the issue may be fairly and squarely made up, I deny that bees ever resort to "exercise" to raise the temperature in the hive in the winter months.

I have never taken any part in the discussion of the hibernation of bees, because I am inclined to believe that the matter is not fully understood in this epoch of bee-history. Nevertheless, and notwithstanding all that has been said to the contrary—and said with much appearance of authority—it is clear to my mind, after long observation, that honey-bees do hibernate under certain conditions, and it depends upon the conditions how long this state of things is maintained. I here venture the theory—and it is not mere theory with me—that if a colony of bees are filled with honey, and closely clustered in the natural way, and immediately subjected to a low temperature, they will live through a period of hibernation without taking food, just as do some of the wild animals that inhabit the Middle States, and like the latter, when the bees are aroused by a rising temperature, they must have food immediately or perish.

That bees feed regularly when closely confined in the cluster in extreme cold weather, like they do in the season of their activity, is a supposition only—it has never been proven that they do; and if they do not, then they hibernate in the "scientific" and ordinary meaning of the word.

Be all this as it may, it is contrary to all we know about insect life, for bees to "exercise" to counteract the effects of a falling temperature. We want the light "turned on."

Christiansburg,♂ Ky.

For the American Bee Journal.

Bee-Keeping in Nebraska, etc.

WM. STOLLEY.

Naturally this State is not very well adapted to apiculture; particularly not the middle and western portions of it. Therefore our apiarists cannot successfully rival with honey-producers located in more favored sections of this great country. For seven years I have kept bees, and while I obtained no surplus the first season (in 1880), from but 2 weak colonies I averaged for the next following five years only 17 pounds of surplus per colony annually; and sold 22 colonies at $12 each, and 16 choice queens. I soon became convinced that unless I could and would improve my location by growing crops of honey-producing plants, which at the same time would be useful as nourishment and feed for cattle and horses, bee-keeping would be a rather up-hill business with me. Accordingly I began to experiment with many varieties of honey-producing plants, and the result is a very gratifying one, in particular respecting a trial with melilot (sweet clover) and also alfalfa clover.

Last spring I began the season with 23 colonies of Italian and Cyprian bees, of which but 9 colonies could be called "extra good," while 11 colonies were "good," and 3 in rather poor condition. I had about 12 acres sown to melilot, within 160 rods of my apiary. My neighbors within 2 miles of my place had about 30 acres of alfalfa clover. The result is as follows:

My honey crop this year amounts to 2,635 pounds, or about 114½ pounds per colony, spring count. Besides my bees, about 20 colonies are kept by other parties in the city, which have shared this cultivated pasture with my own bees. While their crops went mostly into "absconding swarms," I got mine in *honey*. Of the 2,635 pounds of surplus, about 1,700 pounds are from the melilot, and the rest from alfalfa, and from fall bloom of other plants. Alfalfa honey is yellowish brown, and of good flavor.

The first season melilot does not bloom, but gives a heavy crop of most excellent fodder for cattle; but it seems that horses do not relish it. It should be cut in the latter part of June. It then should be allowed to grow until late autumn, when it may be pastured by stock long after all other vegetation is frost-killed. The second year one-half may again be cut for fodder in June, while the other half should be allowed to bloom for bee-pasturage. By the time the uncut part is about ripe in the latter part of August, the part which was cut in June is about in its best, and is most excellent pasture for bees until frost kills it. A timely rain increases the blooming and honey-flow greatly, while drouth does not affect it nearly so much as it does most other honey-producing plants. The honey is nearly white, and of a fine flavor. It takes a good sulky plow and three horses to put the stalks under ground.

Alfalfa clover also yields a very heavy crop of fodder, and bears cutting several times, and may grow for many years without re-sowing; but it should not be cropped the first season, at least that is the experience here with us. One of my neighbors obtained about four tons of excellent fodder per acre—about the same as melilot—and it is relished by both cattle and horses.

My best colony (Italians) gave me 210 pounds of extracted honey, and has 43 pounds left to winter on; and my best Cyprian colony gave me 135 pounds of surplus, and has 34 pounds of winter stores left. I had only one colony (Cyprians) prepared for producing comb honey, which stored 108 pounds in one-pound sections. I increase by the nucleus plan, taking only frames with hatching brood, or both brood and bees, as the case may be, when the condition of the colony demands it, so as to prevent swarming. Thus I was compelled to allow an increase of 13 colonies, some of which have given me from 15 to 20 pounds of surplus, retaining on an average of 27 pounds for winter stores.

By careful selection of my breeding stock, and never allowing drones of the same strain to fertilize my young queens, I think that I now have a most excellent strain of bees for business. I always aim to rear my queens and have them fertilized before the time when needed. So far I have invariably crossed my Cyprian queens with Italian drones, while my Italians are purely bred Italians yet. I find all of my Cyprians better natured than even my Italians.

I have never lost a colony in wintering, and the first loss I met with was last spring, when 5 small colonies with young queens dwindled down to nearly nothing. I winter my bees on the summer stands, in an open bee-shed or house. Besides careful winter packing inside the hive as well as outside, I believe that sugar syrup for winter stores is the cause of my success in this respect. The coming winter will be somewhat of a trial for me, since all of my bees winter (for the first time) exclusively on natural stores—mostly melilot clover honey—as I could find no time to extract the brood-frames, and replace the honey with sugar syrup.

PREVENTION OF ROBBING.

The following is my way of preventing robbing, or when robbing is going on, how I stop it *instanter*:

I have a number of frames on hand, made of 1-inch lumber, which, on one side, are covered with wire-cloth. These frames fit or cover the front of the brood-chamber of my hive exactly. When a colony is attacked, and may be the hive is full of robber bees, I close the entrance, by placing the screens in position. In a minute the screen is filled with loaded and homeward-bound robber bees, when they are allowed to go, by quickly releasing them, and replacing the screen. Three or four repetitions will get the last robber bee out of the assailed hive. In a bad case I leave the screen securely fastened in place for a day or two, after all robbers have been expelled. Early in the morning, when only robber bees are up and doing, I go to the now protected hive and kill a dozen or two of the leaders, and that always ends the trouble. Of course, after removing the protecting screen the entrance should be properly contracted.

Grand Island,⊙ Nebr.

Local Convention Directory.

1886. *Time and place of Meeting.*

Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 7, 8.—Cedar Valley, at Vinton, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.

Dec. 14.—Keystone, at Scranton, Pa.
Arthur A. Davis, Sec., Clark's Green, Pa.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

Jan. 18.—N. W. Ills. & S. W. Wis., at Rockford, Ills.
J. Stewart, Sec., Rock City, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

The Texas State Fair.—B. F. Carroll, Dresden,δ Tex., on Nov. 10, 1886, says:

The Texas State Fair at Dallas, Tex., closed on Nov. 6, 1886. The honey exhibit was very good, and J. W. Eckman took first premiums on honey and Italian bees. I did not take any bees for fear of foul brood, as this disease has been about Dallas for several years. Mr. Eckman secured about $50 worth of premiums. We held an impromptu bee-meeting on the grounds, and a friendly greeting all around. One old bee-man, for the amusement of the spectators, was walking around the grounds with a swarm of bees on his hat, shoulders, face and neck. He would take a mouthful of bees and let them crawl out over his face. My bees are booming on the fall cotton bloom, and will go into winter quarters in fine condition. A splendid crop of mint is now up, and I expect next year that we will have a good report. I have 50 colonies now, and took 1,000 pounds of extracted honey.

Managing the Sale of Honey.—Grant Parish, Gaithersburg,⊙ Md., writes:

I re-voice the many sentiments expressed as to the united congress of bee-men of each State to scale the product of the apiary, and affix a price which will lessen the profit of the middle man, and give what would fall to him to the *producer*, thus making a profitable realization from the bees. It can be done; it must be done if profit can be expected from this vocation. I have just heard that an extensive bee-man in West Virginia has refused to market 2,000 pounds of honey on account of the low prices now reported by these commission men. This showed good judgment, but no more than could be expected from one successful in the business; it is simply protection of one's interest, and it is a deep mystery to me why some of the alleged apiarists will rush to the markets, although dazed at the half-starved price for honey quoted, and will sell, thus for a few dollars sacrificing the market for others. There must be action taken to "hold the market," else the past and present condition of affairs will continue, and bee-keeping be made questionable as to profit. I would be pleased to have bee-men in Virginia and Maryland correspond with me with a view of forming protection.

Results of the Season.—Robert B. Woodward, M. D., Somerset,⊙ O., on Nov. 10, 1886, writes:

The past season has been a good one for this locality. I had 10 colonies to begin with last spring, increased to 19 colonies, and took 600 pounds of excellent honey, about three-fourths of which was comb honey. My best colony (a Syrio-Italian) gave me 120 pounds of choice honey. I sold all but what we retained for family use, at "five pounds for a dollar," or 25 cents for a single pound, and we could have sold five times as much at home. I sold none but choice honey, and have a good reputation, and that will win every time in the honey trade. My 10 colonies (including increase and honey) will net me about $120. We have no basswood, and have to depend on apple, locust, white clover, mustard, etc. I winter my bees on the summer stands, and have never met with any winter losses, and have Italian, Cyprian, Syrian and Albino bees. I keep the best, and mostly for pleasure.

Convention Notices.

☞ The Cedar Valley Bee-Keepers' Association will hold its next semi-annual meeting in the City Hall at Vinton, Iowa, on Dec. 7 and 8, 1886. An excellent programme will be presnted, including essays by the very best of Iowa apiarists. Special rates have been secured at the Hotels, and all are invited to come and help make this meeting both pleasant and profitable. H. E. HUBBARD, *Sec.*

☞ The 20th annual meeting of the Michigan State Bee-Keepers' Association will be held in Grange Hall at Ypsilanti, Mich., on Dec. 1 and 2, 1886, beginning at 10 a. m. Reduced rates have been secured at the Hawkins House. From the excellent essays already promised, we expect a very interesting programme. Only 2 essays will be read at each session, the balance of the time to be devoted to discussions. The committee desire to make this meeting practical and interesting. Noted bee-keepers from other States and Canada have promised to be present. If you have anything of interest to exhibit please bring or send it. Come prepared to ask and answer questions, as the question-box will be an important feature. A cordial invitation is extended to all. Come and bring your bee-keeping friends with you.

H. D. CUTTING, *Sec.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
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923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

This "History" will be sent FREE by express at the subscriber's expense; or will be mailed for 10 cents extra to any place in the United States or Canada.

It is arranged chronologically by years, from 1492 to 1885. Every event is narrated in the order of its date. These are not confined, as in other works, to political matters, but embrace every branch of human action.

This premium is worth the whole of the money sent for both periodicals, and should induce thousands to subscribe, and thus get two unrivalled weeklies for nothing.

This offer is good **only until Jan. 1, 1887,** hence no time should be lost. Send at once!

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Report of the Indianapolis Convention is now published in pamphlet form, uniform with that of last year. It will be sent postpaid for 25 cents to any address.

We have also bound it up with last year's, together with the History of the Society; this we will mail for 40 cents. Or if you send us one *new* subscriber (with one dollar) besides your own renewal, we will present you with a copy by mail.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

To all New Subscribers for 1887 we will present the rest of the numbers for 1886; so the sooner they subscribe the more they will get for their money.

◆

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information over put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

Convention Notices.

☞ The Keystone Bee-Keepers' Association will meet in the Court House at Scranton, Pa., on Tuesday, Dec. 14, 1886, at 10 a.m.
ARTHUR A. DAVIS, *Sec.*

☞ The eleventh annual meeting of the N. W. Ills. & S. W. Wis. Bee-Keepers' Association will be held in the Grand Army Hall in Rockford, Ills., on the third Tuesday in January, 1887. There will be a two days' session. J. STEWART, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 18, 19 and 20, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised. An unusually brilliant programme will be prepared and announced later.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—It has sold better during this month than at any time since the new crop came on the market. Yet prices are not any higher, sales being made at 11@12c. for white honey in 1-lb. sections. Fancy sections of less than 1 lb. in weight, at 13c. Extracted is unchanged in tone or values, being 5@7 cents per lb.

BEESWAX.—23@25c. R. A. BURNETT,
Nov. 9. 161 South Water St.

NEW YORK.

HONEY.—Sales for comb honey the past month have been good, and prices fair. Large shipments from the West are coming in more freely than we anticipated. Present quotations are as follows: Fancy white in 1-lb. sections, clean and neat packages, 13@14c.; 2-lbs., 11@12c.; fair to good 1-lbs., 11@13c.; 2-lbs., 9@10c.; fancy buckwheat 1-lbs., 9@10c.; 2-lbs., 7@8½c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@6 cts.; California comb honey in 60-lb. cases, 10@14c.

BEESWAX.—Prime yellow, 22@24c.

McCAUL & HILDRETH BROS.,
Nov. 13. 34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Best white in 1-lb. sections, 12@13c.; dark, 10@11c., with a good supply in commission houses.

BEESWAX.—23c.
Oct. 10. M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—There is a lively demand for table honey in square glass jars, and the demand for nice comb honey is very good. Demand from manufacturers is slow for dark grades of extracted honey. The ranging prices for extracted is 3@7c. a lb. Nice comb brings 12@15c. per lb. in a jobbing way.

BEESWAX.—Home demand is good. We pay 20@23c. per lb.

Nov. 10. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—The market is not very active and prices a little lower. Choice 1-lb. sections of best white sell at 13@14c.; second grade 1-lbs., 10@12c.; choice white 2-lbs., 11@12c. Extracted, slow at 6c.

BEESWAX.—Scarce at 25c.

Nov. 17. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.

Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted; 3¼@3¾c. for amber extracted; and 9@11c. for comb honey in 2-lb. sections; darker grades bring 7@8c.

BEESWAX.—It finds buyers at 22@24c.

Sep. 28. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.
Oct. 18. O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¾c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c. Market dull.

BEESWAX.—Dull at 20c. for prime.

Nov. 17. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand for all grades is good, and sales are large. Receipts are good and prices are steady with a firm feeling. We quote: 1-lb. sections of white clover, 13@14c.; dark, 10@12c.; 2-lbs. white clover, 11@12c.; dark, 9@10c.; Calif. 2-lbs., 9@11c.; ½-lbs. white clover, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5½c.; Calif. amber, 5c.

BEESWAX.—20@22c.

Oct. 15. CLEMONS, CLOON & CO., cor. 4th & Walnut

Advertisements.

Extracted Honey For Sale.

We have a large quantity of CHOICE **EXTRACTED HONEY** for sale, in kegs holding from 200 lbs. to 225 lbs. each, which we will deliver on board the cars at **7 cents** per lb. for White, and **6 cents** per lb. for Amber Colored. Orders solicited.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1883.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1.25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

A Year among the Bees,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—well painted on the outside, and with 3 iron hoops and a tight-fitting wood cover, at **$2.25** per dozen. They will hold **25** lbs. of honey, and when empty, can be utilized for use as an ordinary household pail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO ILL.

BEESWAX.

We pay **20c.** per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

FORTY-THREE VALUABLE BOOKS FREE!

These books are published in pamphlet form, many of them being illustrated. They treat of a variety of subjects, and we think that no one can examine the list without finding therein many that he or she would like to possess. In cloth-bound form, these books would cost $1.00 each. Each book is complete in itself.

1. **The Widow Bedott Papers.** This is the book over which your grandmothers laughed till they cried, and it is just as funny to-day as it ever was.
2. **Winter Evening Recreations,** a large collection of Acting Charades, Tableaux, Games, Puzzles, etc., for social gatherings, private theatricals, and evenings at home; illustrated.
3. **Back to the Old Home.** A Novel. By Mary Cecil Hay, author of "Hidden Perils," etc.
4. **Dialogues, Recitations and Readings,** a large and choice collection for school exhibitions and public and private entertainments.
5. **The Standard Letter Writer** for Ladies and Gentlemen, a complete guide to correspondence, giving plain directions for the composition of letters of every kind, with innumerable forms and examples.
6. **The Frozen Deep.** A Novel. By Wilkie Collins, author of "The Woman in White," etc.
7. **Red Court Farm.** A Novel. By Mrs. Henry Wood, author of "East Lynne," etc.
8. **The Lady of the Lake.** By Sir Walter Scott. "The Lady of the Lake" is a romance in verse, and of all the works of Scott none is more beautiful than this.
9. **In Cupid's Net.** A Novel. By the author of "Dora Thorne."
10. **Amos Barton.** A Novel. By George Eliot, author of "Adam Bede," "The Mill on the Floss," etc.
11. **Lady Gwendoline's Dream.** A Novel. By the author of "Dora Thorne," etc.
12. **The Mystery of the Holly Tree.** A Novel. By the Author of "Dora Thorne."
13. **The Budget of Wit, Humor and Fun,** a large collection of the funny stories, sketches, anecdotes, poems and jokes that have been written for some years; illustrated.
14. **John Bowerbank's Wife.** A Novel. By Miss Mulock, author of "John Halifax, Gentleman," etc.
15. **The Gray Woman.** A Novel. By Mrs. Gaskell, author of "Mary Barton," etc.
16. **Sixteen Complete Stories** by Popular Authors, embracing love, humorous and detective stories, stories of society life, of adventure, of railway life, etc., all very interesting.
17. **Jasper Dane's Secret.** A Novel. By Miss M. E. Braddon, author of "Aurora Floyd," etc.
18. **Fancy Work for Home Adornment,** an entirely new work upon this subject, containing easy and practical instructions for making fancy baskets, wall pockets, brackets, needle work, embroidery, etc., etc., profusely and elegantly illustrated.
19. **Grimm's Fairy Stories for the Young.** The finest collection of fairy stories ever published. The children will be delighted with them.
20. **Manual of Etiquette** for Ladies and Gentlemen, a guide to politeness and good breeding, giving the rules of modern etiquette for all occasions.
21. **Useful Knowledge for the Million,** a handy book of useful information for all, upon many and various subjects; illustrated.
22. **The Home Cook Book and Family Physician,** containing hundreds of excellent cooking recipes and hints to housekeepers, also telling how to cure all common ailments by simple home remedies.
23. **Manners and Customs in Far Away Lands,** a very interesting and instructive book of travels, describing the peculiar life, habits, manners and customs of the people of foreign countries, illustrated.
24. **57 Popular Ballads.** Same size as sheet music. All the old and new songs.
25. **Called Back.** A Novel. By Hugh Conway, author of "Dark Days," etc.
26. **At the World's Mercy.** A Novel. By Florence Warden, author of "The House on the Marsh," etc.
27. **Mildred Trevanion.** A Novel. By "The Duchess," author of "Molly Bawn," etc.
28. **Dark Days.** A Novel. By Hugh Conway, author of "Called Back," etc.
29. **Shadows on the Snow.** A Novel. By B. L. Farjeon, author of "Bread-and-Cheese-and-Kisses," etc.
30. **Leoline.** A Novel. By Mary Cecil Hay, author of "Brenda Yorke," etc.
31. **Gabriel's Marriage.** A Novel. By Wilkie Collins, author of "No Name," etc.
32. **Reaping the Whirlwind.** A Novel. By Mary Cecil Hay, author of "Old Middleton's Money," etc.
33. **Dudley Carleon.** A Novel. By Miss M. E. Braddon, author of "Lady Audley's Secret," etc.
34. **A Golden Dawn.** A Novel. By the author of "Dora Thorne," etc.
35. **Valerie's Fate.** A Novel. By Mrs. Alexander, author of "The Wooing O't," etc.
36. **Sister Rose.** A Novel. By Wilkie Collins, author of "The Woman in White," etc.
37. **Anne.** A Novel. By Mrs. Henry Wood, author of "East Lynne."
38. **The Laurel Bush.** A Novel. By Miss Mulock, author of "John Halifax, Gentleman," etc.
39. **Robinson Crusoe.** A thrilling narrative by Daniel De Foe, describing the adventures of a castaway on an island in the South Pacific Ocean.
40. **How to Make Poultry Pay.** A practical and instructive series of articles by Mr. P. H. Jacobs, Poultry Editor of "The Farm and Garden."
41. **Parlor Magic and Chemical Experiments,** a book which tells how to perform hundreds of amusing tricks in magic and instructive experiments with simple agents.
42. **Gems of the Poets,** containing eight charming selections from Tennyson, Longfellow, Whittier, Byron, Shelley, Moore, Bryant, and others.
43. **Building Plans for Practical, Low-cost Houses,** a full description and plans of Eight modern houses, ranging in price from $500 to $4500.

We offer the above books as PREMIUMS for Club Subscriptions to the AMERICAN BEE JOURNAL. For **Two Subscriptions,** with $2.00, we will mail any **10** of the books. For **Three Subscriptions,** with $3.00, any **25** of the books. And for **Four Subscriptions,** with $4.00, the entire list, or **43 Books,** will be mailed.

This offer is only good for subscriptions, accompanied by the Cash, received **during November and December, 1886.**

We will mail any 5 of these books for **25 cents,** or the **whole forty-three for $1.50. Order by the Numbers, only.**

THOMAS G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILLINOIS.

Muth's Honey Extractor,

Perfection Cold-Blast Smokers,
SQUARE GLASS HONEY-JARS, etc.

For Circulars, apply to
CHAS. F. MUTH & SON,
Freeman & Central Ave., - CINCINNATI, O.

P.S.—Send 10c. for Practical Hints to Bee-Keepers

HUMPHREYS' HOMEOPATHIC SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.
45A12t

RIBBON BADGES.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents—in English or German.

THOS. G. NEWMAN & SON.,
923 & 925 West Madison Street, Chicago, Ill.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

IMPORTED Italian Queen in full Colony, only $8.00 —O. N. BALDWIN, Clarksville, Mo.
4A1y

BEE Weekly—Sixteen Pages.
JOURNAL, Chicago, Ills.
$1 a year. *Sample copy free.*

RUPTURE

Have you heard of the astounding reduction for DR. J. A. SHERMAN'S Famous Home Treatment, the only known guarantee comfort and cure without operation or hindrance from labor! No steel or iron bands. Perfect retention night and day, no chafing, suited to all ages. **Now $10 only.** Send for circular of measurements, instructions and proofs. Get cured at home and be happy, office 294 Broadway, New York.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

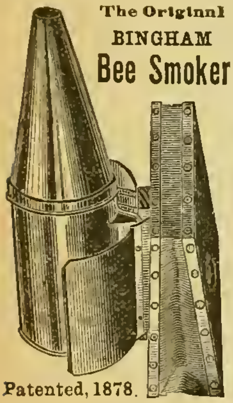
Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, $1.00, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

☞ The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for $1.75.



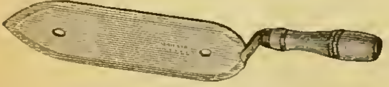
Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am *boss*—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
15Atf **ABRONIA, MICH.**

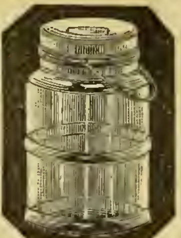
Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf J. VANDERVORT, Laceyville, Pa.

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ...	**$1.60**
" 2 pounds " "	**2.00**
" 3 " " "	**2.50**

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

10A1y **J. M. SHUCK,** Des Moines, Iowa.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

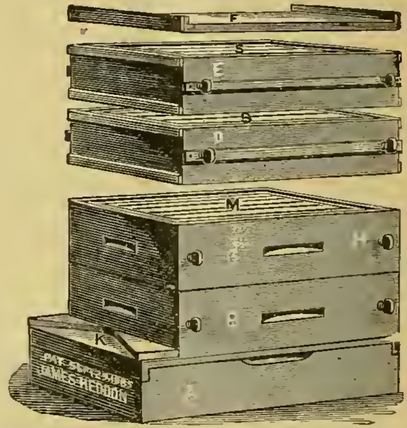
WEAK MEN MADE STRONG

All men seeking Health, Strength and Energy should avoid drugging the stomach and send for **Prof. MARSTON'S TREATISE,** which is published especially in the interests of those who are **Weak, Nervous** and **Debilitated.** If you have been drugged and humbugged send at once for this **FREE BOOK,** Replete with information of value to young and old men.

THE MARSTON CO. 19 Park Place, New York.
46A17t

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison-St., CHICAGO, ILL.

THE
AMERICAN APICULTURIST

WILL be sent one year and a copy of the 3rd Edition of the Bee-Keepers' Handy-Book, on receipt of $1.50. The book contains 300 pages and 100 fine illustrations.

HENRY ALLEY,
41Atf WENHAM, MASS.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Dec. 1, 1886. No. 48.

Only a mortal's powers are mine,
Weak at their fullest strength.

◆

We Live in deeds—not years ;
In thoughts—not breaths ;
In feelings—not in figures on a dial.

We should count time by heart-throbs ;
He lives most who thinks most,
Feels the noblest, acts the best.

◆

Sufferers from Asthma are reported to have found almost instant relief from a single tea-spoonful of warm honey.

◆

Abraham Van Arsdale, of Raritan, Ills., found a colony of bees and eight feet of honey in his chimney when he put up his parlor stove this fall.

◆

Lorenzo J. de Sobotker, of Riverton, Miss., died on Oct. 18, 1886. He came from the West Indies about a year ago to take charge of some apiaries in Bolivar county, Miss. His wife has been ill, and has written to us under date of Nov. 23, 1886, as follows:

> I should certainly have written to inform you sooner, but I have since been ill ; and this, together with my preparations for returning to the West Indies, have occupied all my time. My husband took a severe cold and died, the doctor says, of testites and malarial fever. His principal delight was in receiving and writing for the AMERICAN BEE JOURNAL, and if a single copy went astray, he would worry about it until it came to hand ; but you have received the last article from his pen.

The condolence of the AMERICAN BEE JOURNAL readers is hereby extended to the widow in her sudden bereavement.

◆

A Sweet Pyramid.—The *Reveille*, of Litchfield, Minn., contains the following item :

> A pyramid of sweetness is displayed in the show window of the city grocery, being composed of boxes of honey from the apiary of E. Kimball, of Forest City. It makes a handsome appearance, and is complimentary alike to the taste of Mr. Kimball and Messrs. Branham & Hickcex, and to the industry of Mr. Kimball's bees.

Selling Honey on Commission.—The AMERICAN BEE JOURNAL has often advised the selling of honey in home markets, and thus *create* for it many avenues for consumption. It does not believe that there is any over-production ; the only thing to be complained of is *uneven distribution*. If the honey now produced were rightly distributed there would be but little to be found in the great marts of the world to-day.

To send honey to large cities to be there sold on commission has done bee-keepers more damage than any thing else with which we are acquainted.

In our Canadian cotemporary of Nov. 17, the following item is quoted from the San Francisco *Alta* :

> An Illinois farmer sent his honey crop to a Chicago commission man, followed the invoice in and bought some of it of the fellow for 14 cents a pound, for which he ascertained the whole lot was sold. But when the Chicago man made returns it was at only 12 cents. It is for reasons like this that earthquakes avoid Chicago.

Then after a similar letter from the shipper, the Canadian editor says :

> Being right in the city where the AMERICAN BEE JOURNAL is published, the Manager of the Bee-Keepers' Union should make investigation into this matter and enlighten the public still further. We take it that the object of the Union is to protect the bee-keeper from deceptions of this nature, as well as to preserve their legal and just rights as citizens.

The Manager of the Union interviewed the commission merchant and found that instead of its being a whole "honey crop" it was *one crate*, sent without previous notice and without having the name of the consignor on the crate ; that the same day another lot of honey was received, and this single crate without name got mixed up with that lot ; that a crate of this honey was entered in his books as sold at 14 cents per pound, weighing 35½ pounds. The commission merchant, upon his attention being called to the complaint, wrote a letter (of which we have read a copy) explaining how the discrepancy might be accounted for, and asking for the marks on the crates, etc. This letter has never been answered except by the complaint published in the Canadian paper. The amount in dispute is only 77 cents, and that will be sent to the complainant as soon as he makes reply.

We have made this statement, not because of its importance (one way or the other), but it was sought to saddle it upon the "National Bee-Keepers' Union." We do not deem it the legitimate work of the Manager of the Union to settle petty disputes between parties, such as occur daily in the legitimate pursuit of business of every department. But when he *does* investigate such matters he will state the facts as he finds them.

This reminds the Manager of the following anecdote, the laughable application of which he leaves to the enjoyment of the readers :

> A man was bounding round in a car on a railroad, when the conductor came through. "Can you tell me," said the man, with a great show of sarcasm, "whether this car is on the track or not ?"
> "Sir !" replied the conductor, reaching into his pocket, "here is a volume of the rules and regulations of the road."
> "But what do I want of it ?"
> "Look it over and see if you can find any rule saying that I must spend my time running alongside of the train reporting its position to the passengers. See if there is anything in that volume that compels me to go humping myself along on the prairie and yelling through the windows 'four wheels off now !' or 'hind trucks dragging on the ties !' or 'gentlemen, the baggage car has just rolled into the ditch !' or 'passengers will please remain seated while we turn off here and scoot across the prairie after a jack-rabbit !' Look over the rules, sir, and and see if you find any of these directions. If you don't—in the future please take your own observations on the wheels."

◆

The Union.—Considerable space is given in this number of the AMERICAN BEE JOURNAL to the affairs of the "National Bee-Keepers' Union." Mr. Demaree, on page 758, urges all "to give substantial aid to the Union." Mr. E. France, on page 762, suggests that at this time of the year, when thousands are renewing their subscriptions, is the right time for joining the Union. The dues are 25 cents a year ; and one assessment (which will in all probability be all that will ever be wanted) is $1.

The time of paying the dues was set, because of that time being the time of instituting the organization. That can easily be altered. In fact, we are now formulating some amendments to the Constitution, and that is one of the things to be amended. These amendments will soon be submitted to vote, and will, no doubt, be carried. Meanwhile let every one who believes in defending "our pursuit" against the attacks of the misguided and perverse, send to this office $1.25, and join the army of defenders.

It seems now to be pretty well decided that the Union will defend only its members, who became such *before* any lawsuits were commenced against them—hence, all should take time by the fore-lock, and "join the Union" *at once !*

The views of the Advisory Board are pretty well expressed on page 761, and these views over the signature of each one, should be carefully perused. The line of policy suggested by Mr. A. I. Root, at the top of the last column on page 761, seems to have already been presented by Mr. M. B. Holmes, of Delta, Ont., in the last issue of the *Canadian Bee Journal*. He suggests that each member of the Ontario Bee-Keepers' Association "should place $5 in the treasury, and appeal for justice to the higher courts." The editors of that paper approve of the proposition, and are urging others to assist in making "some decisive arrangement" in time to take an appeal. This is right ; now let the Canadians act promptly ; energetic work will accomplish wonders.

◆

A Swarm of Bees, for some unaccountable reason, have pitched their headquarters in the Baptist church spire in Gibsen, Ga. The hive is in the small part of the spire, about 60 feet from the ground, and the bees can be seen, by any one of good eyesight, coming and going continually.

◆

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

◆

The Michigan State Convention is now in session at Ypsilanti.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Cyprian and Syrian Bees.

Query, No. 341.—1. Can Cyprian and Syrian bees be distinguished by their color, or any markings? 2. Do they rear more brood than Italians? 3. What, in your opinion, are the best bees for gathering honey? —Texas.

1. Yes. 2. No. 3. Well-bred Italians.—J. P. H. BROWN.

1. Yes, by a close observer. 2. Yes, but out of season. 3. Italians for this locality.—G. M. DOOLITTLE.

It is possible that they may, but I have seen most excellent authorities (?) badly puzzled. In times of scarcity they do rear more brood. Dark Italians or hybrids are the best honey-gatherers I have ever owned.—W. Z. HUTCHINSON.

1. Experts claim that they can; I am not expert enough, I must confess, to do so. 2. Not with myself. 3. Pure Italians.—J. E. POND, JR.

1. Yes. 2. Fully as much. 3. Italian bees, or a mixture of Cyprians and Italians. The Italians are the most saving race.—DADANT & SON.

1 and 2. I do not know. 3. The best bees for comb honey, so far as I know, are a cross between the best strains of Italian and German bees.—JAMES HEDDON.

3. I have had little personal experience with any except Italians and hybrids, but from what I read about others, I am not anxious to get any other race.—C. C. MILLER.

1. Yes. 2. Yes. 3. A cross bred bee having a Syrian or Cyprian queen-mother. Italian drones give the best results in crossing. The good points of such a cross can be perpetuated, and every point of objection bred out, is my experience.—G. L. TINKER.

1. Yes, by a person who has had large experience with them, but by the ordinary observer, no. 2. Yes. 3. If honey is near by and plentiful, a good strain of "black bees" will produce the most honey; but if honey is scarce, or a long distance away, then a cross between Syrian queens and Italian drones will produce the greater quantity. This is only my experience.—H. D. CUTTING.

1. Yes. 2. They have excelled in this respect so far as I have tried them. If it was a mere question of the amount of honey gathered in a given time regardless of consumption by the gatherers, I would say that the Cyprians excel all other bees, so far as my experience goes; but——3. Properly bred Italians are the best bees, when all things are considered. If Italians do not gather more honey than some other varieties of bees do, they have superior qualities in the way of economy, as they manage to keep honey in store, when other bees fail.—G. W. DEMAREE.

I think so. Surely Syrians are easily distinguished from Italians. Syrians do breed faster than Italians. I cannot speak confidently yet as to the best bee. All have their good points. The hypothetically best bee is a cross so well planned as to combine all the good qualities and eliminate the bad ones.—A. J. COOK.

Covering Bottom-Boards.

Query, No. 342.—How will plaster of Paris do with which to cover old bottom-boards?—F.

Try it and report.—G. M. DOOLITTLE.

We would prefer hydraulic cement. DADANT & SON.

It will do, but I should prefer to burn them up and make new ones.—H. D. CUTTING.

Well enough; but I should prefer the simple board.—A. J. COOK.

I think that new bottom-boards would be preferable when the old ones give out.—G. L. TINKER.

If it can be made to stay in place it might answer, but it seems to me that wood is too cheap to allow of any such "puttering."—W. Z. HUTCHINSON.

If to remain as a permanent fixture I should guess it might answer well, but I have had no experience.—C. C. MILLER.

I have never tried it, but I think it would work well, as it is a most excellent absorbent of moisture; and, besides, can be easily kept clean.—J. P. H. BROWN.

I think it will answer a good purpose, but it is liable to scale off, and is not durable on that account. I have used thick whitewash made of lime and salt, which has given good satisfaction. But it pays better to have good painted bottom-boards.—G. W. DEMAREE.

I do not know of any necessity for covering old or any bottom-boards with any substance; plaster would probably do as well as anything for so covering.—J. E. POND, JR.

It would be all right, as far as the bees are concerned, if you are satisfied with the weight of it, and its lack of durability. If a bottom-board will hold together I see no use for the plaster.—JAMES HEDDON.

Italianizing Colonies.

Query. No. 343.—How soon can I Italianize colonies after being transferred?—T.

Right away, or any time when most convenient.—C. C. MILLER.

Any time, before, during, or after transferring.—JAMES HEDDON.

Introduce Italian queens at the time of transferring.—W. Z. HUTCHINSON.

As soon as the colony gets settled, or within 4 or 5 days.—G. L. TINKER.

As soon as *you* are ready.—G. M. DOOLITTLE.

It depends altogether upon the season.—DADANT & SON.

Just as soon as you have queens ready to put in.—H. D. CUTTING.

I always wait until they get their "new house in order" before I give them a new queen.—J. P. H. BROWN.

At once. It will take some weeks for all the bees to become changed.—A. J. COOK.

You may Italianize them right at the time you transfer them, if you have laying queens ready. The black queen should be removed and the Italian queen caged until the bees are reconciled to their adopted mother. Or it may be done later in the season, if you do not have laying queens ready.—G. W. DEMAREE.

Just as soon as you can introduce a queen. If the introducing is done during fruit-bloom (which is the proper time for transferring), the bees will probably all prove Italians in three months, and perhaps less. If in the fall, Italianize late in the following spring.—J. E. POND, JR.

Convention Notices.

☞ The Keystone Bee-Keepers' Association will meet in the Court House at Scranton, Pa., on Tuesday, Dec. 14, 1886, at 10 a.m.
ARTHUR A. DAVIS, *Sec.*

☞ The eleventh annual meeting of the N. W. Ills. & S. W. Wis. Bee-Keepers' Association will be held in the Grand Army Hall in Rockford, Ills., on the third Tuesday in January, 1887. There will be a two days' session. J. STEWART, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

☞ The Cedar Valley Bee-Keepers' Association will hold its next semi-annual meeting in the City Hall at Vinton, Iowa, on Dec. 7 and 8, 1886. An excellent programme will be presented, including essays by the very best of Iowa apiarists. Special rates have been secured at the Hotels, and all are invited to come and help make this meeting both pleasant and profitable. H. E. HUBBARD, *Sec.*

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 18, 19 and 20, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised. An unusually brilliant programme will be prepared and announced later.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ⊸ east; ⟜ west; and this ♂ northeast; ⸜O northwest: O⸝ southeast; and ⚲ southwest of the center of the State mentioned.

For the American Bee Journal.

Putting Bees into the Cellar.

EUGENE SECOR.

Query, No. 336, appears to me to be one of the most practical questions ever put in the query department; and the replies thereto are so strikingly uniform one would suppose that everybody understood the importance of housing bees early. Yet I am led by observation to believe that as a general thing bees are left out-doors too long. There is a lamentable amount of ignorance on the subject of wintering. This is probably one reason why so many losses are reported.

I have noticed advice in agricultural papers to the effect that bees should be left on the summer stands just as long as there is a possibility of a flight, arguing that they could not endure a long confinement, and that the imprisonment should be reduced to the *minimum*. And from the practice throughout the country by those who are not experts, it would seem that one of the things hardest to learn in the art of bee-keeping is to house early and not remove them until late. My advice to my neighbors has been to put their bees into the cellar early —before cold, freezing weather enervates them—by the same parity of reasoning that I would house my domestic animals before they lose flesh and become weak from exposure.

Bees will better stand a confinement of six months if housed while in a vigorous, healthy condition, than three, if forced by exposure to eat more than would otherwise be necessary, distending their abdomens and weakening their constitutions by the enforced accumulations which unfavorable weather will not permit them to discharge.

If the bees that are first carried in and the last carried out, prove to be the best colonies the following season, it pretty thoroughly disproves the theory that they cannot stand the necessary confinement.

It might be well to state, however, that the *temperature* of the cellar has much to do with successful wintering. If it is too cold perhaps the bees would be as well off in the open air. A great deal of this much-talked-of diarrhea is caused by too cold cellars. Many persons with whom I have talked do not seem to comprehend why bees will not do better in a cellar where the temperature *sometimes* goes down to the freezing point, than outdoors where it *often* goes down to *zero*. They will say, "Why, back in New York, or in Ohio, we never used to house them at all." My observation is, that a damp, *cold* cellar is generally fatal.

One reason why bees ought to be housed early is, after the cessation of field-labor the less they exercise the better. If the fall is pleasant they will fly every day from force of habit. They will often be seen a mile or more from home, although there is not the shadow of a possibility of their finding anything they need. Every flight they take wears them out. The colony is fast being depleted at a time when the queen is not laying an egg. It would be better for them if the temptation to fly were removed. An early housing will keep the colony stronger, and save thousands of bees that may possibly live long enough to render good service in the cluster when breeding begins.

I think the length of time that bees can be confined without a flight has lengthened somewhat in the minds of bee-keepers in the last 25 years. When Langstroth wrote his book a forced confinement of four months would have been thought extravagant. Now we think nothing of leaving them in the cellar five months, and under favorable conditions, longer. Thus the improved methods are "marching on."

Forest City, ♁ Iowa.

For the American Bee Journal.

The Winter Stores of Bees.

C. W. DAYTON.

Of this matter of feeding sugar for winter stores there are two very broad sides. The first question of moment is, whether sugar is better or safer than pure honey. My first idea is this: Had the Maker of the bees and flowers at the time of the creation been aware that there was a food that was better suited to the wants and requirements of the bees, then the flower would have been arranged for its distillation. As to its determination by man, we know that where one succeeds with sugar hundreds succeed with honey; but perhaps it requires less experience and knowledge of the wants of the bees for one to succeed with sugar. This may very likely be the case.

The next question is the cost of the sugar as compared with honey. I made the estimate once, that taking the honey from the hives and selling it to buy sugar to put in the place of the honey, would take time and labor enough to make the cost of the sugar 15 cents per pound. As to honey being cheaper than sugar, I think there is no mistake. To be sure the best grade of sugar and honey are about the same price, and the addition of the water to the sugar increases its bulk one-half; but if we take the trouble we can obtain pure honey of buckwheat or fall flowers for one-half the price of sugar, and I think that pure fall honey is as accessible as pure cane sugar.

But there is one point which sugar feeders have overlooked or kept to themselves. That is the loss of feed when feeding colonies in this way. I have known many colonies when fed 10 pounds of syrup to put 3 pounds of it somewhere else than in the combs. Some colonies fall short one pound; others 4 pounds; making the average 2½ pounds loss. It is plain to many that it is easier, cheaper and quicker, to slip into one side of the brood-chamber 2 or 3 well filled combs of honey that we did not take the trouble to extract, than it is to adjust feeders, cart and melt sugar, or fight robber bees. The brood-chamber must be examined or overhauled, feed or no feed; and if it must be feed, that it can be supplied in a more satisfactory manner than by the insertion of combs of honey is very questionable.

Two of the last five winters I wintered my bees without the total loss of a colony. Early on every cold morning in October, I am in the apiary stealing combs (on which the bees do not cluster) from the sides of the brood-chamber. After obtaining a comb, another is moved so that the next morning finds another uncovered by bees. This plan is carried out two or three times, or until only three or four combs remain, when on a very cold morning their winter stores are supplied and division-boards adjusted. No smoke is used, no stings received, and no robbing is excited. Many times their winter stores were supplied only a few minutes before carrying them into the cellar, and I could see no difference in their wintering.

In the manipulation of 100 colonies for the production of honey, the bee-veil has remained entirely unused. I have just finished a week of preparing the bees for winter, and the total number of stings received during the time was one.

Sugar-feeding, the pollen theory, etc., are quite well answered in the words of Hazen—"If you are so kindly disposed toward us, pray, let us alone; we certainly will prosper when you don't care a bit about us."

Bradford, ♂ Iowa, Nov. 13, 1886.

For the American Bee Journal.

Curing Foul Brood with Salicylic Acid.

JOSEPH A. SAVAGE.

My first trial was by using an atomizer to spray the combs, and a small round stick to insert in all cells in which I could discover any matter. This method left the bacteria concealed in the honey, and probably in the pollen, not being reached by the treatment.

The next method was to extract the honey from all combs containing no brood, and immerse the extracted comb in a solution of the acid, in all cases washing the hive thoroughly with a strong solution. While this method apparently was successful, the year following in some of the hives the disease again appeared.

Another method was to remove all the combs from the hive and destroy them with the frames, first brushing the bees off into a cleansed hive prepared with new frames filled with foundation; cage the queen 24 hours, to prevent the deposit of eggs; prevent the exit of bees, and feed them with honey treated with a solution of the acid in proportion of a tea-spoonful to a quart of honey, this last being to correct all honey that the bees carried with them from the old hive, and I think the most important thing to do,

This last method of treatment has, with me, proved to be a perfect success, as I have not had a sign of any disease in my apiary for six years.

The presence of dead bees in the comb, or the foul smell which they occasion, does not indicate a case of foul brood as many suppose; but when partially developed larvæ turned into yellow matter is found, and an odor that may be detected 20 feet from the hive, one may be certain the disease is present. Such will never cure itself, and it will require persistent and thorough work with some of the few remedies, all of which must have the power to kill the bacteria. I prefer a solution of salicylic acid prepared according to Mr. Muth's formula, because I have used it, and have been successful with it.

Ludlow, ♁ Ky.

Written for the Indianapolis Convention.

The Future of Bee-Culture.

G. W. DEMAREE.

Every thoughtful person who is about to engage in any business pursuit, or feels a deep interest in the same, naturally, and wisely, too, asks what of its future? What of its prospects in the years to come? Can I invest money in the business with a reasonable hope of reaping fair profits? These are a few of the questions that the thoughtful, prudent man will ponder well in his mind. Only the rash and visionary individual will rush into a business pursuit, blindly taking the chances, whatever they may be.

If we trace back the history of bee-culture, we will find that any suggestions that bee-culture may be safely engaged in as a "specialty," independent of other sources of a livelihood, is of modern origin. Bee-culture is a branch of agriculture. The man who rears bees, and produces honey and wax for the market, is a farmer, an agriculturist, as truly so, as is the man who plows and produces crops. The primary meaning of the Saxon word *feorm* (farm) is to provision, to produce, and the bee-keeper is a producer in every sense of the word. Furthermore, I am persuaded that in the near future it will be found profitable to plow and plant and sow for pasturage for the bees.

In my opinion the success of bee-culture in the future will depend largely upon its being connected with other suitable branches of agriculture, thereby making the income of the apiarist less precarious, and putting him in a position of full fellowship with the great agricultural cause. The great mass of agriculturists believe in "mixed farming," and are ready to smile at any person who would presume to risk his living on the precarious income from any small branch of agriculture. Is he not right in looking with suspicion on a single branch of the great agricultural business as a "specialty?"

This idea of "specialty" in bee-culture has out-grown the business, and there is no good reason for it. As I have already said, bee-culture is a branch of agriculture, and, in fact, a very small branch of so great a business as is agriculture. Hence the man who proposes to make bee-culture a *specialty*, must expect to create a surprise in the minds of men who engage in "mixed farming" with only ordinary success.

It has not been considered safe in the past to rely upon any one branch of agriculture for a living. Right in the cotton belt of the great South, where cotton has been produced as a specialty for many years, there is now an awakening going on looking to a system of "mixed farming" in the future, which idea is gaining ground rapidly. If bee-culture is an exception to all other rural pursuits in this respect, it argues wonderfully for the apicultural cause. It occurs to me that many of us who have written on the subject, have erred in that we have encouraged specialty in a general way. Specialty may, and will do, in certain cases, but in a general way it will never answer in any rural pursuit.

The dangers likely to beset the future progress of bee-culture are numerous. As honey begins to take its place with other commodities considered necessaries to life and comfort, low prices must follow, and low prices must necessarily exert a depressive influence. Some will be anxious to get out of the business, because bee-culture will not pay in the majority of the cases, as a "specialty." The supply business is likely to be over done with shoddy goods, and the "patent hive" craze will play its part as never before. But the chief danger is the unavoidable conflict now already commenced between the fruit and bee-interests. We have had in this part of Kentucky a fair illustration in the season just past, of what may grow into serious trouble in the future. The sudden transition from drouth to seasonable weather early in August, had the effect to split the skins of the grapes to an unusual extent, and the result has been the general remark, that "the bees have riddled the grape crop." The cider-mills have been another source of annoyance.

It is clear to me that these troubles will have to be settled in the future, at the "bar of justice." The apiarist must necessarily prosecute his business with ungovernable working stock. He cannot hinder his bees from going wherever their inclinations take them, and it will be a legal question in the future as to whether public policy will protect the bee-keeper in his business, or ostracize him as a public nuisance.

It seems next to the impossible to arouse bee-keepers to a realization of these facts. "The Bee-Keepers' Union" is the only scheme that has been devised, which promises to aid bee-keepers in maintaining their rights. It has been in active operation for more than a year, and all will admit that its affairs have been well managed, and a good work has been accomplished through its agency, and yet comparatively few bee-keepers are found ready to support the "Union" in its endeavors to establish bee-culture with its increasing proportions on a level with other legitimate industries.

As to myself, I feel quite sure that I shall never call on "The Bee-Keepers' Union" for help, but this does not influence me in the least in choosing what my course shall be in this matter. The old maxim which says, "In helping others we help ourselves," is good philosophy. Let all of us act out this grand principle, and our rights, and the rights of those who shall fill our places in the future, will be respected.

Bee-culture is a new industry—a new enterprise as regards modern improvement, and all new industries and new enterprises must depend much for their success upon public-spirited men—men who do not look solely to the dollars and cents in immediate clutching distance; but the true stimulous is "well-grounded faith" in the enterprise, that it will feed, clothe and educate thousands of families in the future.

In conclusion I would like to suggest to those bee-keepers who have stood off and refused or neglected to give substantial aid to the "Union," that they reconsider this matter, and if they find that they cannot co-operate with the Bee-Keepers' Union on account of defects in its organization, or constitution, that they suggest some better plan, something that will meet their approval. Their silent do-nothing position is more irksome to the friends of the "Union" than would be their open opposition.

Christiansburg, ♁ Ky.

For the American Bee Journal.

The Published Report—Omission.

WM. F. CLARKE.

The report of the North American bee-keepers' annual convention, recently held at Indianapolis, is to hand, and the publisher is to be complimented for its neat typographical appearance, and especially for the promptness with which it has been issued. It is a new thing under the sun for the members of the North American Bee-Keepers' Society to have the report in pamphlet form within three weeks of the adjournment of the annual meeting, and those who were necessarily absent will not fail to appreciate this "new departure."

With its many excellences this publication is marred by an important omission. Most of the afternoon of the second day's meeting was taken up with a matter of which the only record given is the following: "N. W. McLain, of Aurora, Ills., then read an essay on 'Bee-Keeping and Apiculture.'" The essay does not appear, nor is there any report of the discussion that followed. It is understood that papers read at the convention are the property of the society. At the annual meeting last December, Mr. McLain gave us extracts from his forth-coming official report, and explained that these were not eligible for publication until they had been duly submitted to the United States Department of Apiculture. But there was no intimation that the paper presented at Indianapolis was official, and must be held over, nor is there the least reason to suppose that it is to be embodied in the next report of the Apicultural Station.

In the absence of information I naturally infer that the manuscript has not been handed over by its author. Whatever the motive may be for withholding it, such a course is, to say the least, unwise. The pith of the essay and the after discussion have been given in other published reports. It is generally known that exception was taken to the main drift of the paper, and that certain of its positions were challenged. As the party who criticised Mr. McLain's paper, I beg respectfully to call for its publication. I was interrupted in my comments to give opportunity for Mr. R. L. Taylor to read his essay on "The Coming Bee," or I should have pursued them farther. I would like to discuss the subject in the AMERICAN BEE JOURNAL, but prefer that we first have the paper before us in print.

According to my notes, Mr. McLain told us there was a very large amount of bee-keeping, and but little apiculture; that the only progress now to be made is by improving the bee; that little has been done as yet in improving the bee; that dairymen have improved their cows far more than bee keepers have improved their bees; that the hive is of little comparative account; that Father Langstroth attached overweening importance to it in the title of his book—"The Hive and the Honey-Bee;" and that among the various lines along which progress is to be made, the hive holds the fourth and last place. These and other statements furnish invitable debatable ground, and it would enliven the columns of the AMERICAN BEE JOURNAL, and kindred periodicals to have them well discussed. Our convention was rather tame and dull. This matter was the liveliest episode in it, but just when there was promise of a little fun, the thing was nipped in the bud.

I know we are now under the presidency of such a peace-loving "brother," that if he sees a cloud of controversy arising in the distance no bigger than a man's hand, he wants it dispelled *instanter*, but all are not of that way of thinking. A friend of mine was once boasting in a company (from which his wife was absent) of the peace and love that had characterized their wedded life; why, there had never been a cross word or a difference of opinion between them, and so forth. Whereupon a married lady present exclaimed: "O, dear! what a dull time you must have had!"

Guelph, Ont.

[Mr. Clarke is in error about the essay which Mr. McLain read at the Convention. Had it been voted "that the essay be received and placed on file," as was done with all others, it would have been the property of the society. As this was not done, Mr. McLain had a perfect right to put it in his pocket, as he did.

We will, however, add that Mr. McLain has informed us that he is revising and cutting down the essay, preparatory to offering it for publication in the AMERICAN BEE JOURNAL. Its extreme length was its greatest objection, for as originally prepared and read, it would take nearly the whole of one issue of the JOURNAL to print it.—ED.]

Rural New Yorker.

Comb Honey vs. Extracted.

PROF. A. J. COOK.

While it is a fact that extracted honey possesses all the intrinsic excellence of comb honey, and will go much further, yet it is equally true that comb honey, because of its appearance and the fact that the comb acts as a wholesome and pleasant dilutent, will ever find readiest market. Fine comb honey is so attractive that it rarely goes begging. Extracted honey, because of its real excellence and cheapness, will surely be in great and ever increasing demand as its virtues come more and more to be understood and appreciated, as they must be; but while the bee-keeper will have to push the sale of his extracted honey, the markets will come seeking after his beautiful comb homey. Hence, there is an incentive for every bee-keeper to study the methods of securing a fine harvest of comb honey.

Any novice can secure a good crop of extracted honey, while only the expert can secure as much of the beautiful comb. Some of our bee-keepers say they can secure only about one-half as much comb as extracted honey; others say they can secure nearly as much of the comb. Surely, then, it behooves every bee-keeper to study the methods of comb honey production, that he may secure the most of that which sells best.

One of the things we must look after in working for comb honey is to get our product in the neatest form with the least labor. There is no need of urging all to use the one-pound sections, made of the whitish poplar or basswood. All know that these alone can compete in the honey markets of to-day. It is just as important to keep these sections neat and clean. Of course they can be scraped, but this is attended with labor and danger. How much better to secure our sections full of honey with the very minimum of propolis or bee-glue to mar their beauty. To do this we find the Heddon slatted honey-board just the thing. This is made exactly the size of the top of the hive; that is, the part containing the brood. If the outside measure of the hive is 14x20 inches, the honey-board will be 14x20 inches. For the Langstroth hive, I make it 13x19⅞ inches. The slats are tacked to a rabbeted rim, which, below, is in the same plane as the slats, but which projects above ⅜ of an inch. Thus while the whole under surface is flat and of the same level, above the rim projects ⅜ of an inch above the balance of the honey-board. The slats which need not be more than ¼ of an inch wide are ⅜ of an inch apart, and are so made as to break joints with the frames below. If the frames run lengthwise, as do the Langstroth, then the slats should extend lengthwise of the hive. If crosswise, as do the Gallup frames, then the slats of the honey-board should run crosswise.

This honey-board is used between the brood-frame and section-case, and if any one is troubled with the queen going into the section-case to lay eggs, the zinc excluders should be fastened in the ⅜-inch spaces between the slats; then the workers can go into the sections while the queen cannot. Now, if we use this honey-board in connection with the double bee-space, I find we secure our sections very neat and clean—often as free from stain as when freshly put into the hive.

To secure the double bee-space, the brood-frames should come within ⅜ of an inch of the top of the hive. That is, if the rabbets for the frames are ¾ of an inch deep, and the top-bars of the frames ⅜ of an inch thick, we shall just secure this space. Now, when the slatted honey-board is laid on the hive we note that ⅜ of an inch is the perpendicular distance between the plane of the top of the brood-frames and that of the bottom of the honey-board, and if our sections come in a plane with the bottom of the honey-case, and this is placed on the slatted honey-board, we have a second ⅜-inch space between the upper surface of the slats and the lower surface of the sections. With these two spaces, even in crowded hives, the bees keep the sections mainly clean. I feel sure that no one, after once trying these slatted honey-boards in connection with the double space, will ever discard them. I have now used them three years, and I am more than pleased with my success.

There is just one thing that might be considered an objection to this arrangement — everything must be just right, or it does not work well.

Get the space a little too deep or shallow, and the bees stick in the glue and brace-comb with an energy that may well discourage the bee-keeper. But why not have it just right? Accuracy should be the motto in hive-making.

Agricultural College, Mich.

For the American Bee Journal.

Marshall County, Iowa, Convention.

The Marshall County Bee-Keepers' Association met at the Court House in Marshalltown, Iowa, at 1:30 p.m., on Oct. 16, 1886. The minutes of the previous meeting were read and approved.

The subject of winter management was the first taken up. Mr. H. Pinkerton stated that he prepared his bees for winter by doubling up light colonies; making it a point to always save the best queen and destroy the other, as he did not like to run the risk of her coming out winner in the queenship of the united colony. He feeds up colonies where he finds they need it, by taking frames of honey from those that have to spare, and giving to the needy. He said by this means he makes all strong and in good condition for the winter. He winters his bees in a cellar at a temperature of 40° to 48°. He would prefer it not to fall below 45°, or rise above 54°. He leaves the honey-board on a part; some have oil-cloth on, with the cloth turned back about one-half, to prevent the collection of moisture, which they do badly if left down. A part he had cloths or quits on, but he could see no difference in the three sets prepared as stated. He places the hives with all the slant they will bear, one above another, with strips between them. The caps are left on the summer stands. He leaves the hive-entrance open full width, so that the bees can have plenty of air, and a good chance to keep the hives clean. His cellar is well ventilated. A part of it was light and part dark. He found the most dead bees in the light part. In the winter of 1885 and 1886 he had 117 colonies in the cellar, and took out 116 the next spring, having lost but one, and that was queenless. He puts his bees in before the weather gets cold, and puts them out in the spring after it gets warm. He has no certain date to put them in or out, but is governed by the weather. The bee-room of the cellar is separated from the vegetable department by a partition.

Mr. A. Fogg had wintered his bees in the cellar the past two winters without loss. He put the hives in with the surplus arrangements on. This seemed to prevent the accumulation of moisture. The hives were placed with the entrances next to the wall, and ventilated by opening a window and a door. The cellar was kept light until the weather began to get warm in the spring, when he found it necessary to darken the window. The temperature of the cellar got as low as 34°; he would prefer it not to run that low. There was some water in the cellar, but he did not see as it did any harm.

The President made a few remarks stating that he used a stove a short time in his cellar, so as to keep it at the proper temperature. He thought that and good preparations before putting the bees into the cellar, were the main points.

The Secretary stated that he liked the use of the division-board, so as to cut the hives down to 6 or 8 frames, or less if the size of the colony required it. This makes them more concentrated in space, more easily kept warm, thereby requiring less food, and being much lighter to handle in carrying in and out. The extra frames could be placed in again in the spring as needed. He preferred quilts for covering bees in the winter as they were less liable to collect moisture or mold the combs.

The Association requests all bee-keepers, whether members of it or not, to send a written report to the Secretary, of the number of colonies in the spring, number of increase, amount of honey taken (both comb and extracted separately given), and the number of pounds of wax made. The report can be sent on a postal card to the Secretary. It is desired to make a full report of the honey production of Marshall county for the season of 1886. All bee-keepers are asked to report at an early date. We believe we can make a good showing of the county in honey production.

The subjects for discussion at the next meeting will be "Spring care of bees," by L. Koeper, and "Surplus Arrangements," by A. Pinkerton.

The convention then adjourned to meet in Marshalltown, Iowa, on the third Saturday in January, 1887, at 10 a.m. J. W. SANDERS, *Sec.*

Gleanings.

Adulterating Comb and Liquid Honey.

The following letter was forwarded to us through the kindness of the publisher of the *American Grocer*, with an expression that I should answer it for publication:

> *Editor American Grocer*:—Will you be kind enough to give me information about manufactured honey, if there is such a thing? I think you have published articles on it in your paper, but I have failed to see them. If you will answer this through your paper, you will oblige. J. H. WHITE.
>
> Bridgeport, Conn., Oct. 26, 1886.

In response to the above request we sent the following reply, which was in the *American Grocer* for Nov. 11:

We are very glad indeed to answer in regard to our branch of agricultural industry, especially as the honey-business is getting to be a branch of no mean pretensions. When liquid honey sold at from 20 to 25 cents per pound, and glucose, or corn syrup, was worth only from 5 to 6 cents per pound, there was a great temptation toward adulteration; and eight or ten years ago it was probably a fact that a great portion of the liquid honey in glass jars and tumblers to be found in our markets, was more or less adulterated. Now, however, when liquid honey is sold at from 8 to 10 cents retail, and 5 to 7 cents wholesale, there is but little inducement to adulterate with glucose, especially as the quality of glucose at all fit for the purpose is worth from 4½ to 5 cents per pound. On this account I believe there is but very little honey to be found on our markets now that is adulterated. Perhaps I may add, that a good many mistakes, and a good deal of uncharitableness have arisen from the fact that both pure honey and pure glucose (or corn syrup) are, chemically speaking, pretty nearly the same thing; namely, grape sugar—glucose being grape sugar manufactured expressly for the purpose of making it retain a permanent liquid form. In California, excellent honey is now in quantities as low as 3 cents per pound. This state of affairs makes it more feasible and more likely that glucose should be adulterated with honey, than that honey should be adulterated with glucose. The present low prices of cane sugar, also, have been discouraging to those engaged in adulterating sweets.

Bee-keepers have also been accused of feeding their bees glucose, and then taking it from the combs and selling it as honey. This foolish piece of slander on our bee-keeping brethren was probably first started by some one who did not even know that bees do not *make* honey—they simply *gather* it. The act of storing it in the cells does not change it in any respect. If you feed the bees sugar syrup, it will be sugar syrup when it is taken away from them. The same is true of glucose or any other substitute for honey.

We now come to artificial comb honey. The only way in which it is possible to put a spurious article of comb honey on the market would be by feeding the bees glucose or some other substitute for honey; and there would be a greater probability of this being done, because comb honey usually commands a half more in price than liquid honey, were it not for the fact that the bees must consume a very large quantity of honey or other sweets to enable them to secrete a very small quantity of white wax from which the comb is made. This latter fact has been so well proven by the experiments of hundreds of bee-keepers, that the practice of feeding liquid honey, in order to make the bees store comb honey, is now, I believe, universally abandoned. As an illustration: When the honey season closes in the fall, most bee-keepers find themselves in the possession of more or less sections of nice, marketable honey, with cells not quite finished. A large apiarist frequently has a ton or more of such unfinished sections. A little feeding would enable him to finish these out, put them on the market, and get his cash, instead of waiting a whole year to have them finished. On this account it would be extremely convenient to feed enough pure honey to get them finished. Well, sometimes this will pay; but we have all found out that so large a quantity of honey must be given to the bees to get just a little put back into these unfinished combs, that even this has been mostly abandoned.

Our last point is in reply to the newspaper statements that were so widespread a year or two ago, to the effect that our comb honey on the market was made by machinery, and that neither comb nor contents ever came from a bee-hive. So widespread was this falsehood, that in our issue of Nov. 1, 1885, page 738, I offered $1,000 to anybody who would tell me where such spurious comb honey was made. No one has ever given the information, neither has one ounce of manufactured comb honey ever been forthcoming. It is a mechanical impossibility, and will, in my opinion, remain so. It is true, bee-keepers use largely what we call "comb foundation;" that is, sheets of beeswax stamped with the impress of the base of the honey-comb. The bees use this, draw out the cells, and fill them with honey; but as these sheets are always pure beeswax (in fact, a substitute that will answer even tolerably has never yet been discovered), there is nothing really spurious about it.

I hardly need add, that the above slanderous report in regard to bogus comb honey was very damaging to the bee-keeping industry. It probably obtained wider credence because Prof. Wiley, some years ago, started it by what he termed a "scientific pleasantry."

The adulteration of our food products is indeed a terrible wrong, and I believe the bee-men are as much in earnest about it as are the dairymen; and if there is anything we can do as a class toward putting these thieves and blacklegs behind such strong iron bars that they will have to be honest, we stand ready to do it; and thousands of us are willing to give our voices, our strength, and our money toward helping to punish the guilty. But let us have charity for each other, and be slow about rushing to the conclusion that everybody is a rogue except—*Your humble servant.*

The National Bee-Keepers' Union.

REPORT OF THE MANAGER.

As stated on page 739, the General Manager of the "National Bee-Keepers' Union" sent to each member of the Advisory Board a statement of the case against the Canadian bee-keeper, Mr. Harrison, who was sued by a neighbor for keeping an alleged "nuisance" on his premises, by keeping bees. The Manager propounded these questions to all of them:

Will it be advisable for the Union to assist in defending this case in Canada, when the owner of the bees is not a member of the Union?

If not, what is your opinion of allowing an adverse decision to be placed in the law-books of America?

To these questions we have received the following replies by the Advisory Board:

So far as I can judge from the data at hand, I would decide that we, as the Advisory Board of the "Union," have no right to use its money to defend this case, even if it were policy to do so. Our organization has been of surprisingly slow growth, and in the light of this fact, I deem it not good policy to do anything that shall tend to make that growth still slower. My reasons for not defending this case are as follows:

1. It seems to me that we have no *right* to defend this case without consent from every member of the Union.

2. If the "Union" shall defend persons who have refused to become members of the "Union" in times of peace, it destroys the one great object of joining it at all. I believe that in my original proposition relative to forming this organization, I wrote that one of its first provisions should be as follows: "Provided, however, that the 'Union' shall defend no member wherein it can be shown that said member joined the 'Union' after it was apparent to him that there was likely to be litigation in which he would become the defendant, and that in every case arising our Advisory Board should carefully examine this feature of the case. It is my opinion that unless this rule is made and rigidly adhered to, and we defend only our own members, the membership of our organization will rapidly decrease in numbers.

3. As regards policy in this matter, we do not know but that Mr. Harrison will, and is well able to defend his case to the full extent of right and justice. As much as I would dislike to have a decision recorded against us in Canada, or anywhere else, with my present light in the matter, I am compelled to believe that it would be neither right nor politic for us to use the "Union's" money in defense of the case.—JAMES HEDDON.

I have been watching the case referred to, and first of all I wish to say that there will have to be some limit to the operations of the "Bee-Keepers' Union." While I do not say that non-membership should *always* be a bar to aid from the Union (because cases of broad interest may arise outside of our membership, which we could not ignore without great risk to the bee-business), yet the only way to make the Union strong and efficient is to protect its members as a general rule, and let others bring their cases before the "Union" on their *true merits.* If I understand the suit against Mr. Jos. Harrison, it is a case of *nuisance under the common law*, and I do not fear any *precedency* from that direction. The laws of nuisance should apply to bees as well as to other interests, or operations of men. Bee-keepers should contend for nothing more than equal rights among men. While I fear that our Canadian brethren will misconstrue our motive if we refuse to come to the rescue of this Canadian case, I am decidedly of the opinion that the "Union" had better save her ammunition for larger game; and for the hasty reasons given above, I vote "no."—G. W. DEMAREE.

I confess that I am a good deal puzzled as to what is best to be done in this matter, but I am always willing to do my part in anything that the majority shall deem best. If the friends deem best to undertake the suit in Canada, put me down for $5. It seems a little discouraging that the editors of the *Canadian Bee Journal* do not see fit to take any part in the "Union."—A. I. ROOT.

As it now looks to me, however much I might desire to aid Mr. Harrison, I cannot believe it would be the right thing that he should have the benefit of the funds of the Union. Rather than that, a special fund should be raised for him, to which those specially affected by the same laws should contribute the lion's share, and leave the funds of the "Union" *for its members.* I now see a possibility of difficulty from a source which never occurred to me before. Any person seeing it coming may unite with the "Union" even after the trouble has commenced, and it would be like a person taking out a policy for fire insurance after the torch had been applied to his house.—DR. C. C. MILLER.

I do not think that the "Union" should now defend cases in Canada, especially for a non-Union man. Let them join. Again, I do not think that a jury trial in a local case would be a serious precedent, however decided. I may keep bees so as to become a nuisance to my neighbor. If so, I should be compelled to remove them. This is the way I feel with the present light.—PROF. A. J. COOK.

While an adverse decision in the Canadian courts might affect us in the United States to a certain extent, still I hardly think the financial statement given would warrant us in defending that Canadian suit.—G. M. DOOLITTLE.

In his letter to Mr. Holtermann of Nov. 10, 1886, Mr. Jos. Harrison remarks as follows:

> If such men are permitted to obtain injunctions to restrain persons from keeping bees, farewell to bee-culture in Ontario..... I cannot say when the final question will be brought up, but expect it sometime before Christmas. The judge submitted these questions to the jury:
>
> 1. Did nearness of the bees cause discomfort to the complainant in any unusual degree?
>
> 2. Did the complainant acquiesce in Mr. Harrison's keeping bees, by allowing him to put 28 hives of bees in his yard before he (Mr. Harrison) found fault with the dirty pig-pen?
>
> The judge was with us all the way through, and only submitted two questions to the jury, but reserved the final one to be decided before a bench of judges.
>
> These were the only questions that the judge submitted to the jury, and they replied in direct opposition to the evidence.
>
> The jury knew nothing of the nature and habits of the bee; only that it would sting, and were prejudiced against all bee-keepers.
>
> I trust and hope, however, that it will come out all right yet. We have had a fire and I have lost nearly all my bees and supplies, about $700 worth; also my dwelling, barn and contents, $800 more; so you see I am pretty well cleaned out. I have about 60 colonies left that I had let out on shares,

but my cellar being destroyed, I do not think I will be able to winter half of them. I am in a dilema—nearly crazed.

There was a case against the corporation of Southampton. An old man of the name of Kelley sued for damages which he received from falling on a broken sidewalk, and recovered damages to the amount of $450, and some spiteful individuals set fire to his house, and the result is that we are all burned out. They burned a great many more than they expected to.

The full statement of the case is made on page 742. It seems that there was bad feeling between the neighbors about a "pig-pen," and this resulted in the present trial.

The attorneys in this case say that it will cost $20 to get a copy of the complete record, and ask that the amount be sent on at once, if it is desired. They then add as follows:

> This is a most important case to bee-keepers throughout Ontario, and as it is the first case of the kind that has been tried in our courts, we should say that it would be particularly interesting to bee-keepers generally to have the case in detail published in the bee-papers. The case at present stands for judgment by the Court on the questions of law; the jury having found the questions of fact in favor of the plaintiff. We expect that it will be argued again at the settings of the Chancery Divisional Court in Toronto, sometime in December.

It is the opinion of the Manager of the National Bee-Keepers' Union, that except, perhaps, in a specially important case (where a decision would affect the pursuit), no one should have the Union's help who was not a member before a suit was begun.

Some editorial remarks on the Union and its work may be found on page 755, to which attention is now called.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
{Bee-Keepers' Magazine	1 25	1 25
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 70
Canadian Bee Journal	2 00	1 75
Rays of Light	1 50	1 35
The 7 above-named papers	5 25	4 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Local Convention Directory.

1888. *Time and place of Meeting.*

Dec. 7, 8.—Cedar Valley, at Vinton, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.

Dec. 14.—Keystone, at Scranton, Pa.
Arthur A. Davis, Sec., Clark's Green, Pa.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

Jan. 13.—Vermont, at Burlington, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Jan. 18.—N. W. Ills. & S. W. Wis., at Rockford, Ills.
J. Stewart, Sec., Rock City, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Managing the Sale of Honey.—L. N. Tongue, Wonewoc,⊙ Wis., on Nov. 17, 1886, writes:

In his editorial, "What fools these mortals be!" on page 723, the editor has expressed my views. I have been on the point of saying a few words to bee-men through the valuable American Bee Journal. Something must be done to protect the interests of those engaged in the production of honey as a specialty. I hope this subject will be discussed freely, and some wise measures brought to the front by our solid bee-men. I have thought for a year past of asking whether it would not be far better to raise money for this object, rather than fight lawsuits. I just mention the subject, hoping that others more capable may take the matter in hand.

Comb Measurement.—G. W. Demaree, Christiansburg,♂ Ky., writes:

I think that Mr. Northrup fails to make out a case of disagreement between Mr. Pond and myself, in our answers to Query, No. 324. I was speaking of square inches of comb, which I called "comb surface," meaning comb space. Seven Langstroth combs contain about 1,000 square inches of comb, while it would require a brood-chamber of nearly 1,800 square inches to accommodate the 1,000 square inches of combs. Mr. Pond speaks of *cell* surface, as indicated by his words, "on each side."

The Bee-Keepers' Union.—E. France, Platteville,♀ Wis., on Oct. 18, 1886, writes:

I think it would be a better time to collect the dues to the Bee-Keepers' Union about New Years. At that time very many of us are renewing our subscriptions, and making arrangements for the coming year, and we are more likely to have the cash to spare at that time, having sold some of our honey. As it is, the dues for the Union fall due at the most busy time of the year, when we are all in a hurry and need all the money we have on hand to pay running expenses. One thing more, I think, ought to belong to the Union. We are producing honey to sell, and many of us have to deal with strangers. We have to ship our honey and take our chances, and the chances are that we get cheated out of our honey by some that make a business of ordering honey and never pay for it. Have a list of all such printed and send one to each member of the Union. How can we get the names? Why, when a member "gets caught," let him send in the name of the party, and have the name put on the list so we can all lookout for him. In that way members of the Union can help each other in an important matter.

[See editorial remarks on these subjects on page 755.—Ed.]

Satisfied with the Results.—Henry Erbrodt, La Harpe,+o Ills., on Nov. 19, 1886, writes:

I have been taking the American Bee Journal for about 4 years, to which I attribute most of my success. Last winter out of 30 colonies I did not lose one. I took 26 more on shares last spring, which was a present from Mr. Edward Pickup, of Limerick, Ills. He also gave 26 empty hives to the La Harpe Seminary. Thus I had 56 colonies of bees, spring count, from which I have taken about 1,800 pounds of extracted honey, and about 1,200 pounds of comb honey, mostly in two-pound sections. I am very well satisfied with the honey crop, but I had to sell it cheap—extracted honey for from 6 to 7 cents per pound, and comb honey at from 10 to 12½ cents per pound—on account of a neighbor bee-keeper who sold his honey at from 5 to 10 cents per pound. I have been very late in getting my bees into winter quarters this fall, as I had so much work to do, and I may lose some colonies on account of it the coming winter, but I hope for the best. I have now 80 colonies. I sold 8.

The Cappings over Honey.—W. Z. Hutchinson, Rogersville,♂ Mich., on Nov. 22, 1886, writes:

I did not arrive at Indianapolis until the morning of the second day of the convention, and about the first discussion I had was one with Messrs. C. P. Dadant and O. O. Poppleton, in regard to the imperviousness of the cappings over honey. Mr. Poppleton and myself took the ground that the cappings over the honey are not impervious to air and water, and are not pure wax. We argued that it was owing to this fact that honey, under certain conditions, absorbs moisture until its bulk is so increased that it oozes through the cappings, and stands in small drops upon the surface of the comb; a phenomenon called "sweating." In proof of the assertion that cappings are not pure wax, and that they are not impervious, I referred to the fact that honey kept in a dry, warm place lost in bulk by evaporation until the cells were only half full and the honey very thick. I also mentioned that Mr. T. F. Bingham, at a Michigan State Convention, four years ago, reported that cappings that had been washed yielded a less number of pounds of wax than there were of cappings, owing to there being considerable residue. Mr. Dadant thought that the "sweating" of honey was due to fermentation, and in regard to the residue left when cappings are rendered, he said it was wax, and he could prove it. Mr. Dadant mentioned one or two things as "proof," but I will not give them here, as I wish him to write an article upon this subject, and I prefer to let him give his own proofs.

Bees Prepared for Winter.—Mrs. J. N. Heater, Columbus,⊙ Neb., on Nov. 17, 1886, writes:

I packed my 80 colonies for winter on the summer stands last week, and it is well that I did, for to-day not a hive is to be seen for the snow-drifts. This is the second day of a fearful blizzard, the first of the season for us. We had a fair yield of honey in this locality during the past season, and bees go into winter quarters in fine condition. I run my apiary for comb honey exclusively, and managed to have but 12 swarms from 75 colonies, spring count, without any dividing.

Whitening Wax—A Bee-Charm, etc.—E. F. Eaton, Gibson Station,♀ Ind. Ter., (Creek Nation), gives the following recipes:

To whiten beeswax: Boil the wax after it is strained in plenty of water for one hour, in which use a few drops of chloride of soda. When the wax is quite cold lift it off the fire and leave it to dry and whiten in the open air. A charm to sprinkle on bees when uniting colonies: Oil of peppermint, 2 drops; oil of anise, 4 drops; oil of bee-bread, 8 drops; placed on a lump of loaf sugar the size of a walnut, and then dissolved in water. Can bees be moved safely by express when the weather is cold? I want to move mine 100 miles north.

[It is better to move the bees early in the spring, when they can have a cleansing flight soon after the disturbance caused by moving them.—ED.]

Favorable Season for Bees.—Wm. Stolley, Grand Island,⊙ Neb., on Nov. 6, 1886, writes:

The past season has been a most favorable one for the apiarist in this part of the world. We have had less high winds than usual, and rain enough to prevent drouth in my location. While the nights were rather cool, this did not seem to materially retard the secretion of honey. We had the first killing frost on Oct. 25 and 26, and the mercury then went down to 12° below the freezing point. Yesterday we had the first snow-fall. My bees are well prepared for winter. They still had considerable hatching brood as late as Oct. 15. They are strong in young bees, and have plenty of winter stores.

Higher Prices for Honey.—Jno. L. Davis, Holt,♀ Mich., on Nov. 22, 1886, says:

I must be one of those suffering from the action of the "fools" the editor speaks of on page 723, as I have been undersold, and half of my honey is still on hand, a crop of 2,000 pounds, half of it being extracted. I do not see how we can help ourselves if some of our fellow-bee-keepers will sell cheap, and not join a compact to hold their honey for higher prices.

Honey Taken by Thieves.—Wm. H. Graves, Duncan,⊙ Ills., Nov. 22, 1886, writes:

On the night of Nov. 17, the building in which I had my honey stored was entered by thieves and about 300 pounds of honey stolen. I consider my loss about $35. The most of it was crated and stamped in two places (16 crates), all ready for market. The crates were what is known as the "Heddon" style, single tin, and contained from 12 to 14 sections in a crate. Most of it was basswood and white clover. They jammed quite a lot of loose sections in a box, and some other things which they found, and left that damaged, greatly smashing the combs out and causing the honey to run out, almost ruining it for sale. I have given away several dollars worth of honey since I have kept bees, and have the good-will of all my neighbors, as far as I know. I have lived in this township for 43 years. I am of the opinion that whoever took it would steal my pocket-book or my horses, or any other property. I write this for the benefit of the fraternity, that they may be on their guard.

Bees in Good Condition, etc.—Jno. L. Byard, Peru,♀ Vt., writes:

I began with 20 colonies last spring, from which I have taken 835 pounds of comb honey. I find ready sale for the honey at from 16 to 20 cents per pound. I put 34 colonies into the cellar to-day that are in good condition, being strong in numbers, and having about 50 pounds of honey per colony for winter. I am sure that the AMERICAN BEE JOURNAL has benefitted me more than $10 the past year; in fact I cannot do without it, and I wonder why every bee-keeper does not take it.

Bees in the Shenandoah Valley.—E. C. Jordan, Stephenson's Depot,δ Va., on Nov. 12, 1886, writes:

There was an immense crop of honey produced here during the past season. Bees and honey are booming in our lovely Shenandoah Valley.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—It has sold better during this month than at any time since the new crop came on the market. Yet prices are not any higher, sales being made at 11@12c. for white honey in 1-lb. sections. Fancy sections of less than 1 lb. in weight, at 13c. Extracted is unchanged in tone or values, being 5@7 cents per lb.

BEESWAX.—23@25c. R. A. BURNETT,
Nov. 9. 161 South Water St.

NEW YORK.

HONEY.—Sales for comb honey the past month have been good, and prices fair. Large shipments from the West are coming in more freely than we anticipated. Present quotations are as follows: Fancy white in 1-lb. sections, clean and neat packages, 13@14c.; 2-lbs., 11@12c.; fair to good 1-lbs., 11@13c.; 2-lbs., 9@10c.; fancy buckwheat 1-lbs., 9@10c.; 2-lbs., 7@8½c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@6 cts.; California comb honey in 60-lb. cases, 10@14c.

BEESWAX.—Prime yellow, 22@24c.
McCAUL & HILDRETH BROS.,
Nov. 13. 34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.
BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—All kinds of honey are dull and lower. Best white comb honey in 1-lb. sections, 11@12½c. Extracted, 7@9c.

BEESWAX.—23c.
Nov. 23. M. H. HUNT, Bell Branch, Mich.

CINCINNATI

HONEY.—There is a lively demand for table honey in square glass jars, and the demand for nice comb honey is very good. Demand from manufacturers is slow for dark grades of extracted honey. The ranging prices for extracted is 3@7c. a lb. Nice comb brings 12@15c. per lb. in a jobbing way.

BEESWAX.—Home demand is good. We pay 20@23c. per lb.

Nov. 10. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—The market is not very active and prices a little lower. Choice 1-lb. sections of best white sell at 13@14c.; second grade 1-lbs., 10@12c.; choice white 2-lbs., 11@12c. Extracted, slow at 6c.

BEESWAX.—Scarce at 25c.
Nov. 17. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2 lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.
Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiarists have sold what they were obliged to dispose of for payment of packages and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4¼c. for choice extracted; 3¼@3¾c. for amber extracted; and 9@11c. for comb honey in 2-lb. sections; darker grades bring 7@8c.

BEESWAX.—It finds buyers at 22@24c.
Sep. 28. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.
Oct. 18. O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¾c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c. Market dull.

BEESWAX.—Dull at 20c. for prime.
Nov. 17. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand is good for all grades, and receipts have been very large of comb and extracted. Home bee-men have kept out of the market until this month; having glassed every lb. section on both sides they are reducing prices, selling 60 lbs. of glass with 160 lbs. of honey, making our market lower. There crop is about 70,000 pounds. We quote: White clover 1-lbs., 12@13c.; 2-lbs., 11c; ½-lbs., 13@14c.; dark 1-lbs., 10c.; 2-lbs., 8@9c.—California 2-lbs., 9@11c. Extracted white clover, 6c.; dark, 4@5c.; white sage Calif., 5½c.; amber, 5c.

BEESWAX.—22c.
Nov. 20. CLEMONS, CLOON & CO., cor. 4th & Walnut

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

This "History" will be sent FREE by express at the subscriber's expense; or will be mailed for 10 cents extra to any place in the United States or Canada.

It is arranged chronologically by years, from 1492 to 1885. Every event is narrated in the order of its date. These are not confined, as in other works, to political matters, but embrace every branch of human action.

This premium is worth the whole of the money sent for both periodicals, and should induce thousands to subscribe, and thus get two unrivalled weeklies for nothing.

This offer is good **only until Jan. 1, 1887**, hence no time should be lost. Send at once!

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Report of the Indianapolis Convention is now published in pamphlet form, uniform with that of last year. It will be sent postpaid for 25 cents to any address.

We have also bound it up with last year's, together with the History of the Society; this we will mail for 40 cents. Or if you send us one *new* subscriber (with one dollar) besides your own renewal, we will present you with a copy by mail.

◆

To all New Subscribers for 1887 we will present the rest of the numbers for 1886; so the sooner they subscribe the more they will get for their money.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

◆

Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year? When you do so, please select any 25 cent book on list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887—will you not assist us to obtain them?

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.25.

◆

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Advertisements.

FLINT-GLASS HONEY-JARS.

HEREAFTER our prices for Square Flint-Glass Honey-Jars will be as follows:

Dime Jars (1 gross in a box), with corks, a gr.	$3 00
½-lb. " " " " "	4 00
1-lb. " (1 gr. or ½ gr. in bx) without corks "	5 00
2-lb. " " " " "	6 50
Corks for 1 and 2 lb. Jars, per gross... ...	75

In lots of 5 gross of Jars, or more, we allow a discount of 5 per cent.

Flint glass being the nicest jars for honey, and prices being reduced, we shall keep no more green glass Jars. A small lot of 1-lb. Jars on hand yet, we offer at $4.50 per gross.

CHAS. F. MUTH & SON,
Cor. Freeman & Central Av., CINCINNATI, O.

THE
AMERICAN APICULTURIST

WILL be sent one year and a copy of the 3rd Edition of the Bee-Keepers' Handy-Book, on receipt of $1.50. The book contains 300 pages and 100 fine illustrations.

HENRY ALLEY,
41Atf WENHAM, MASS.

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Have you heard of the astounding reduction for DR. J. A. SHERMAN'S Famous Home Treatment, the only known guarantee comfort and cure without operation or hindrance from labor! No steel or iron bands. Perfect retention night and day, no chafing, suited to all ages. **Now $10 only.** Send for circular of measurements, instructions and proofs. Get cured at home and be happy, office 294 Broadway, New York.

Extracted Honey For Sale.

We have a large quantity of CHOICE **EXTRACTED HONEY** for sale, in kegs holding from 200 lbs. to 225 lbs. each, which we will deliver on board the cars at **7 cents** per lb. for White, and **6 cents** per lb. for Amber Colored. Orders solicited.

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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A. J. COOK, Author and Publisher,
1Aly Agricultural College, Mich.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

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A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

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HOW to WINTER BEES.

☞ See pages 525, 543, 558, 574, 590, 606, 621, and 637, of the American Bee Journal.
41Atf

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to

A. I. ROOT, Medina, Ohio.

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WE ARE prepared to furnish you with SECTIONS for the COMING SEASON at **bed-rock prices.** Write us.

G. B. LEWIS & CO.,
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IMPORTED Italian Queen in full Colony, only $8.00 —O. N. BALDWIN, Clarksville, Mo.
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These books are published in pamphlet form, many of them being illustrated. They treat of a variety of subjects, and we think that no one can examine the list without finding therein many that he or she would like to possess. In cloth-bound form, these books would cost $1.00 each. Each book is complete in itself.

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16. **Sixteen Complete Stories** by Popular Authors, embracing love, humorous and detective stories, stories of society life, of adventure, of railway life, etc., all very interesting.
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P.S.—Send 10c. for Practical Hints to Bee-Keepers

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In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5.
SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.
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For the manufacture of

Bee Keepers' Supplies

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
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In order to keep our Hive-Factory running during the dull season, we will make a DISCOUNT of 10 PER CENT. on all orders for Hives, Cases, Frames, Shipping-Crates and Bee-Feeders, received during November and December, 1886.

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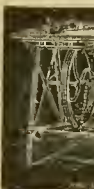
☞ BARNES' FOOT-POWER MACHINERY.



Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter, 50 chaff hives with 7 in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
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Management of an Apiary for Pleasure and Profit; by

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It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, $1.00, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

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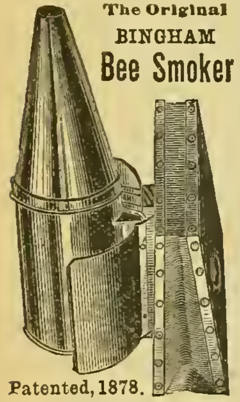
☞ The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for $1.75.

The Original
BINGHAM
Bee Smoker



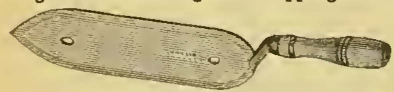
Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years.
E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet.
F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am boss—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.

Bingham & Hetherington Uncapping Knife.



Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Snokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
15Atf **ABRONIA, MICH.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

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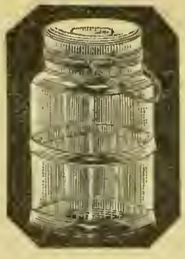
Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
Atf J. VANDERVORT, Laceyville, Pa.

GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen	.....	$1.60
" 2 pounds " "	.....	2.00
" 3 " " "	.....	2.50

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FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

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J. M. SHUCK, Des Moines, Iowa.
10A1y

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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WEAK MEN MADE STRONG

All men seeking Health, Strength and Energy should avoid drugging the stomach and send for **Prof. MARSTON'S TREATISE,** which is published especially in the interests of those who are **Weak, Nervous** and **Debilitated.** If you have been drugged and humbugged send at once for this **FREE BOOK,** Replete with information of value to young and old men.

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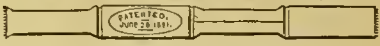
THE "BOSS" ONE-PIECE

SECTIONS.



Patented June 28, 1881.

WHILE attending the North American Bee-Keepers' Convention at Indianapolis, we learned there was a rumor afloat that the Patent on the ONE-PIECE SECTION had been set aside—circulated by unprincipled parties, to mislead bee-keepers. We would say in regard to this, that such is not the case. It is now before the U. S. Supreme Court, at Washington, and will probably be decided before a great while, when we will notify all through the Bee Journal. Until then pay no attention to rumors.

Before ordering write us for prices. We will furnish you Sections as cheap as the cheapest. Let us hear from you before you order. Address,

J. FORNCROOK & CO.,
5Ctf Watertown, Wis., Nov. 1, 1886.

☞ Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

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10 per cent. Reduction

Send for Crowley's Price List before purchasing anything, from the hives to the occupants. Satisfaction guaranteed, the principle of business.

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118,000 Words, 3000 Engravings,
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of nearly 10,000 Noted Persons,
All in one Book.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Dec. 8, 1886. No. 49.

The Editor is at his post—not yet restored to health, but improving slowly.

Vic. Clough, says the *News* of Geneseo, Ills., had an observation hive filled with bees at the Exposition in Henry county.

When a Man begins by declaring he has something to say to you "in all love and kindness," look out for Cayenne-pepper and vitriol before he gets through. Honey in the mouth—a sting in the tail.

Mr. R. F. Holtermann writes to us that he finds no fault, under the circumstances, with the decision of the Union not to defend the Canadian bee-keeper, Mr. Harrison, and adds :

> If I understand aright, had Mr. H. joined the Union previously, his case would have been defended. I agree with the latter part of A. I. Root's remarks, on page 761.

The Triple Convention at Albany, N. Y., will be held on Jan. 11-13, instead of a week later, as at first stated. This will be a union convention of the New York State, the Eastern New York, and the New Jersey and Eastern associations. Every one who can do so, should attend this very important meeting.

The Lawsuit mentioned on pages 330, 483 and 491, Stanley *vs.* Darling, before Judge Bradstreet, in the District Court at Waterbury, Conn., being "an injunction to prevent Mr. Darling from keeping bees," has been quashed by the Judge. The expenses incurred by Mr. Darling for attorneys and witnesses, amount to $50. Of this he pays one-half and the Union the other half, according to his proposition.

Richmond, Ind.—Some one has written a postal card to this office on business, but did not sign his name ! *Who is it ?* We cannot do the business without knowing the name of the writer.

Producers' Association.—On page 774 is an article by Mr. M. M. Baldridge, which will pay the honey-producers to read and think about. It is directly in their interest, and should have candid and careful consideration. Possibly many of the plans enumerated would be advantageous to apiarists, but it is quite probable that some of the plans may not be generally approved.

What do the readers of the various bee-periodicals think of excluding the market reports of commission men, and refuse to publish even as advertisements their quotations ? We would like to hear from all on this subject, and if it is decided to do so, it should be commenced at the New Year. Now let us at least *discuss* this point.

It will be remembered that some six years ago a few individuals complained very *bitterly* because more and longer market reports were not given. Perhaps they were in the wrong, and may have demanded that which has been a detriment !

As the subject here presented is one in which all are interested, let all give it a thorough discussion !

Before dismissing the subject it may be well for us to say this much. Of course market quotations on honey (both comb and extracted) must be published, and if not supplied by the commission men, they must be made by the producers, or a selected committee by the Producers' Association. But how are these prices to be maintained? Only by centralizing the honey product. How about the slip-shod, back-woods, go-as-you-please bee-men, who, ever and anon, ruin the honey markets of the country, by their lack of intelligence and unbusiness-like methods ; who invariably sell their little crops for less than half their value, just because they "don't want nary a bee-paper, no how ;" they "heve had bees for forty year, and know'd it all long afore the new-fangled notions were born'd ?" Yes : how to control these fellows is the question. Will Mr. Baldridge answer? Will Dr. C. C. Miller, who has had a theory about publishing honey-markets for years, tell us what he thinks about the matters proposed by Mr. Baldridge ? and all the rest of our readers—Here is a *living topic* for you ! ! Tell us what you think about it—but take time to *think* before writing. "Be sure you are right, then go ahead."

See-a-bright Display of Honey.—The *Index* of Parkersburg, W. Va., says that Mr. L. C. Seabright, of Blaine, O., carried off all the first premiums but one, in the Apiarian department of the State Fair at Wheeling, W. Va. Mr. S. is a progressive and practical apiarist, and it is no wonderful thing that he should take all the "ribbons." The *Index* adds :

> This gentleman had such a nice display that it attracted a great deal of attention from visitors, who were pleased on account of the convenient shape of the packages. The extracted honey was shown in pint, pound, and three-pound glass pails, all being in marketable shape. His comb honey, in one and two-pound sections, looked so bright and clear, that it was universally admired and commented upon. Mr. Seabright should feel very proud of his fine exhibit, and of his premiums also. Mr. Seabright has produced two tons of honey this season from 37 colonies, which shows that his energy and enterprise is suitably rewarded.

How to Find a Market for Honey.—Mrs. L. Harrison, in the *Prairie Farmer*, makes the following very sensible remarks on the above subject :

> "Why didn't you tell me that you had honey to sell ?" should be printed in characters as large as Barnum's show-bills, and circulated among farmers and small producers. A farmer who runs 40 colonies for extracted honey, told the writer that he could not nearly supply the demand in his own neighborhood, and never delivered a pound, his customers coming to his house for it. He had created a market, and a brisk one too. Farmers could easily make honey as good as legal tender, in paying many small accounts. The blacksmith, carpenter, and repairer of farm machinery all have to eat, and in many instances have to wait months for their pay—until the pigs are fattened and sold, or cattle ready to turn off. In lieu of taking honey off to town in hot weather, realizing 6, 8 or 10 cents per pound, it could with a little tact and judgment be dished out at from 15 to 20 cents. Whenever a farmer buys a rake, a tin cup or a reaper, he should find a honey customer if he has it to sell, and his druggist should not be obliged to send to a distant city for honey to compound his cough mixtures. "Honey for sale" should be upon the gate-posts of all producers.

Last Week the editor was on "the sick list," and a few errors crept into the type—one of which is of sufficient importance to need a correction. On page 755, we intended to say that the annual dues to the National Bee-Keepers' Union, of 25 cents, and one assessment of $1, would in all probability be all that would ever be required in any one year. The words "annual" and "in any one year" were omitted. Some may claim that one dollar should pay for *all time !* Hence this correction.

Mr. G. W. Zimmerman, ex-president of the North American Bee-Keepers' Society, informs us that he is unable any longer to attend to his bees or read the BEE JOURNAL on accout of failing eye-sight, and a paralatic stroke ; since the latter affliction, he can only walk at times by the aid of two canes. He has owned and handled bees for 60 years, and was one of the pioneers of apiculture in America. The BEE JOURNAL extends its sympathy with the afflicted brother.

We have Received a photograph of Mr. Ivar S. Young, of Christiania, Norway, a bee-keeper of considerable experience, and late editor of the *Tidskrift-for-biskjotsel*, the bee-paper for Norway. The photograph is placed in the BEE JOURNAL album with thanks.

We have Received the catalogue of David Landreth & Sons, of Philadelphia, Pa., for 1887, the oldest seed house in America—66 pages.

Do you Want a Farm Account Book ? We have a few left, and make you a *very tempting offer.* It contains 166 pages, is printed on writing paper, ruled and bound, and the price is $3. We will club it and the Weekly BEE JOURNAL for a year and give you both for $2. If you want it sent by mail, add 20 cents for postage.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Bees Carrying Out Brood.

Query, No. 344.—We had no honey-flow until buckwheat bloomed, after the middle of August. I had stimulated my bees by feeding and spreading the brood-nest, and the hives were full of bees and brood, when the honey-flow commenced. Why did my bees carry out brood, both worker and drone brood, at the commencement of the honey-flow? They kept it up about a week after the honey-flow commenced. I examined them thoroughly for moths, but none were present. I had surplus boxes on the hives before the honey-flow commenced.—L. M. F., Nebr.

If the flow had really commenced I do not know.—W. Z. HUTCHINSON.

I never saw such a case, and cannot explain it.—A. J. COOK.

I fear your "honey-flow" was mighty weak—too weak to support the great amount of brood, and for self-preservation the bees destroyed a portion of it.—J. P. H. BROWN.

I never saw anything of the kind, and should attribute the cause to the larvæ of the wax-moth, if such a thing should happen in my apiary.—G. M. DOOLITTLE.

The only reasonable guess that occurs to me, is that the surplus boxes were objectionable in some way as to kind or position, and the bees threw out brood to make room for honey in the brood-nest.—C. C. MILLER.

I guess your bees were bound to load the brood-chamber with honey. I would ascribe as the cause either cool nights or too pure Italian bees, or a combination of both.—JAMES HEDDON.

As is often the case, sufficient data is not given to enable an answer to be given that would be more than a guess. If the frames were spaced as they ordinarily are, the brood may have been carried out to give storage-room; and I hazard the guess that I have stated the cause.—J. E. POND, JR.

It would be hard to give an intelligent answer to your question without having all the facts to judge from. I would guess that your bees were starving just before the honey-flow commenced, and it was the starved brood that was expelled. Then that "spreading of the brood-nest" may have resulted in chilling some of the brood, and making it necessary to remove it. Bees do not usually carry out starved or chilled brood right at the time the misfortune occurs.—G. W. DEMAREE.

Those bees were surely living on half rations during the time the brood was being carried out, although the buckwheat was in bloom. There was no doubt a large amount of unsealed brood in the hives. The stimulative feeding was stopped, and the bees failed to get from the flowers enough to support so much brood.—G. L. TINKER.

Amount of Honey Stored by Bees.

Query, No. 345.—How much more honey will bees store by using an extractor, and not having foundation furnished them?—G. R. B.

It depends altogether upon conditions. If they have to build their own comb, they might not store as much.—J. P. H. BROWN.

Considerable more. Much depends upon the skill of the apiarist.—A. J. COOK.

The query is incomplete. The plan of management that is to be compared with this method is left to be guessed at.—W. Z. HUTCHINSON.

I am not sure I understand the question. Many think twice as much extracted as comb can be obtained from the same colony.—C. C. MILLER.

About one-third more, as they are ordinarily worked. When worked on frames placed just bee-space apart in the brood-chamber, and plenty of room given in the sections, there is little if any difference.—J. E. POND, JR.

I do not know that I fully understand what was in your mind when you asked the question. In our short honey seasons I cannot get a paying honey crop with the extractor without empty combs or foundation to commence with. In other words, it has never paid me to have combs built in the upper stories in the natural way for taking extracted honey.—G. W. DEMAREE.

They will not store so much. If I extracted all surplus, and did not consider the question of profit, I should want all the foundation the bees could use. But if working for comb honey and the most profit, I should use only starters of foundation in the brood-chamber, and also in the sections, and never allow over 750 square inches of comb surface in the brood-chamber for swarms.—G. L. TINKER.

More than what? Than comb honey? Do you mean no foundation in either case, or in the case of taking extracted honey only? Well, in any case, very much depends upon the operator and the functions of the hive he uses.—JAMES HEDDON.

Top-Ventilation of Hives.

Query, No. 346.—Should all hives have ventilation in the top-story?—S.

Not at all times.—W. Z. HUTCHINSON.

Top ventilation is not absolutely necessary.—J. P. H. BROWN.

Mine never have. For out-door wintering perhaps they should have.—C. C. MILLER.

I think not. Perhaps locality has something to do with these things, but it does no good in my apiary.—G. W. DEMAREE.

I do not use any ventilation except at the entrance, and consider such perfectly ample.—G. M. DOOLITTLE.

For my own use I would not put a ventilation hole in the top of any hive.—H. D. CUTTING.

Not exactly, but they need at least to have absorbents in the upper story for winter. A little upper ventilation is better than none.—DADANT & SON.

I would prefer to have no ventilation except at the one entrance at the bottom of the brood-chamber. All others I believe needless and a bother.—A. J. COOK.

It depends upon the definition given to the term. In the winter that form of ventilation should be given that will retain heat and allow moisture to be imperceptibly carried off. In the brood-rearing and honey-gathering season all ventilation should be produced at the entrance.—J. E. POND, JR.

Not as any one knows of is it necessary in either winter or summer. Bees winter well, and store great quantities of surplus that do and do not have such ventilation.—JAMES HEDDON.

No, but the cover should set on loosely so that it may be raised for ventilation in very hot weather. My hives for out-door wintering are made to fit close on top, so that there is no top ventilation except through cracks and the pores of the wood. The bees always come through strong and without moldy combs.—G. L. TINKER.

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CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ☉ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; ○+ east; +○ west; and this ♂ northeast; ○ northwest: ○ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Badly Stung!

WM. F. CLARKE.

All summer long, with gloves and veil,
I've kept myself protected;
Yet now must tell a sorry tale,
About one spot neglected.

My nose's tip the veil would touch,
And oft I speculated.
Whether, if bees assailed me much—
(For I am sore *bee-hated.*)

Sometime or other I might get
A sting on the projection
Of my proboscis, through the net,
At the veil's intersection.

It seemed a most unlikely thing,
That any insect archer
Should thus exactly aim a sting;
So fear took its departure.

But wise philosophers have taught
Truth is more strange than fable,
And my delusion came to naught
Like the old tower of Babel.

Achilles could not wounded be,
Save in one spot—his heel;
Yet there, with dire fatality,
Was aimed the deadly steel.

And I, impervious everywhere,
Save at my nose's tip,
Received a wicked dab right there,
That made me "tear and rip!"

It was a bright and lovely day,
That third of this November,
But oh! the mischief was to pay,
As I shall long remember!

While I was packing up my bees
With forest leaves and chaff,
And feeling perfectly at ease,
Too confident by half,

A Parthian arrow hit my nose
Just at its *ultimatum*,
And a not mild expletive rose,
"Confound the bees, I hate 'em!"

The nasal organ quickly swelled
To twice its usual size:
While tears of pain and anguish welled
From both my weeping eyes.

My none too lovely phiz was shorn
Of all its scanty beauty;
And for three days I went forlorn,
Unfit for public duty.

I now must have a glass-front veil,
Or a wire face-protector,
And prove no more, as in this tale,
A stupid nose-neglector!

Guelph, Ont., Nov. 10, 1886.

For the American Bee Journal.

Curing Foul Brood by Starvation.

G. M. DOOLITTLE.

Why the idea has so generally obtained that it is necessary to *starve* the bees of a foul broody colony for from 48 to 72 hours when treating them for cure, on the Jones plan, I cannot conceive, unless it is because Mr. Jones so recommended. It should be remembered that our departed M. Quinby treated foul brood on the Jones plan (less the starving operation) before D. A. Jones thought of bee-keeping, and probably not far from the time he (Jones) was born, he (Quinby) telling us that his first case of foul brood was found in 1835, or more than 50 years ago.

In treating regarding the disease, Mr. Quinby tells us that if a swarm from a foul broody colony, which issues naturally during the swarming season, is hived in an empty hive, that such swarm will not have the disease afterward, unless contracted by getting foul honey from some diseased colony later on in its existence, as the honey carried with them from the parent colony is all consumed in building comb, which destroys the germs of the disease. I have had no experience with the disease since 1872 and 1873, but all of my experience at that time proved Mr. Quinby correct in every particular.

During June of 1872 I noticed a few cells of foul brood in some 4 or 5 colonies, but not enough so but what I thought they would swarm, which they all eventually did. These new swarms were hived in clean, empty hives, and never afterward had the disease. In three weeks after the old colony swarmed, all the bees in the old hive were driven out into an empty hive and left to build up, which they did; and they never had the disease again. In no case were these bees confined to the hive at all, but had their liberty at once, and were busy the next morning gathering honey from the fields. Later on in the season I found the disease in 2 or 3 more of my old colonies, and desiring to run no risks, I immediately drove the bees from them as before. The season was now so far advanced that I found these colonies would not have time to build comb and secure sufficient stores for winter, so I again turned to Quinby to see what was to be done. On page 219 of his "Mysteries of Bee-Keeping Explained," I found these words: "On no consideration put them (the driven bees) into empty combs, as they would be likely to keep some of the honey for their brood. If it is desirable to put them in a hive containing comb, they may be transferred to it after they have been in an empty one long enough to consume all the honey they have carried with them. If honey is scarce at the time they should be fed."

In accordance with this I left them in the hives they were driven into until the first little larvæ began to hatch, when the partially built combs were taken away from them and a complete set of combs given. These were soon filled with brood and stores for winter, while I had a nice start in the way of comb to hive new swarms upon the next year, or to set up for starters to put in sections, as the combs were beautifully white. Late in the fall I found a few cells of diseased brood in a few more of the old colonies, which were marked, and as soon as it would do in the spring these were also driven.

By the way (in this locality), there is no nicer time to examine for foul brood than in October, for in the latter part of that month there is, as a rule, no healthy brood in the hive, so if capped cells of brood are found scattered here and there in the comb, they are easily seen, while it is not easy to detect such cells at other times. As these last were driven when there was no honey in the flower, I fed them as directed by Quinby, so that they built comb right along and made profitable colonies during the season. I had now driven all my colonies, which had old combs in the spring of 1872. except 2 or 3, and these were carefully watched, but showed no signs of the disease afterward, nor have I seen a cell of foul brood since in my own yard or within ten miles of here.

What I wish to impress on the minds of the reader is that the starvation process is not necessary in curing foul brood on the Jones or Quinby plan, and besides being unnecessary, it is a useless waste of both time and labor. Is it not much better to have a square foot or two of nice white comb built in frames by these bees with no labor, on the part of the apiarist, in first putting them in a box, lugging to the cellar or into a dark room, and then out again to return them. say nothing about the discomfort given the bees? If these frames partly full of combs are not wanted for starters, they will be nicely filled with all worker comb if given to nuclei to complete, or quite a saving will be made over the other process if they are melted into wax, while the discomfort given the bees is all done away with. I hope all having foul brood in their apiaries will next year try the plan that I have above detailed, and report upon the working of it.

Borodino, ☉ N. Y.

For the American Bee Journal.

Producing Honey for Market.

C. H. DIBBERN, (200).

This all-important subject still remains in a very unsettled and unsatisfactory condition. I am glad to notice the editorial on page 723, and I think that much could be accomplished by such a course as is there marked out, and I hope to see that idea pursued. Before that plan will become entirely practicable, however, something more is required. All who produce honey for market must learn to have it in neat, clean, new sections, of uniform size, and I believe the standard one and two pound sections are best for all purposes. It must be scraped of every particle of propolis, and crated in new cases before offering it for sale.

I believe that all bee-keepers who produce honey for sale, wish to get all they can for it, and that the reason why some sell at such very low figures is on account of the lack of information where to sell, and by not having their honey in the best shape—mixed honey, old sections, odd sizes, dirty-looking crates, bulged combs, etc. Of course such a bee-keeper cannot hope to get the prices that A. and B. do for their snowy honey in faultless packages. Honey in poor shape and condition is not wanted in the home market, and it is certainly not fit to ship elsewhere; it is therefore *forced* off at some price, and the market ruined for all. Now what we want is, to teach these bee-keepers to produce only honey in the best possible shape, and they can then ask and get a fair price. My own home market was spoiled exactly as described in the editorial above referred to, and I was forced to find other markets.

I notice that Mr. Thielmann, on page 726, advises not to use combs a second year without first extracting the honey. To bring his idea up to modern times, he should have added, "After extracting cut out the combs, melt them up, and burn the old sections." He is evidently on the right road, however, and will probably catch up after awhile.

Milan, ⟜ Ills.

For the American Bee Journal.

U. S. Honey-Producers' Association.

M. M. BALDRIDGE.

One of the chief objects of this article is to stir up a hornets' nest! The nest has been in sight for years, but it has now grown so big that it has become a nuisance. There must, by this time, be "lots" of hornets in the nest, so to begin the "fun" let me throw a few pebbles at it to see how much life there is in it. Having provided myself with an iron-clad armor of defense the hornets may now come if they wish!

On page 723 is one of those brief but pithy editorials which reads thus:

"It will pay producers to allow local stores a commission of 20 per cent. on the sale of comb honey if they would retail it at 20 cents per pound. Better this than to allow retail prices to run down to less than the net amount you would then receive from the stores."

Now, there is good sense in the foregoing extract for honey-producers to analyze and heed. But will they heed it and put it into practice? If not, why not? Why continue to ship your honey away to some large city, to be sold on commission by wholesale dealers, and neglect to supply your home markets? In any event, why not supply your home markets first? Then, if there be a surplus, will it not be time enough to ship it away beyond your reach and perhaps control? Just think of this and then act. But, says the reader, in what way should I supply the home markets? Do as the Editor indicates, to-wit: By selling your honey direct to consumers through the retail dealers, and by them on commission only. Not at *their* price but at *your* price. Pay retail agents a good commission; if they disobey instructions take away the unsold honey and refuse to supply them with any more until they comply with your wishes. This is the way the flour producers on Fox river do, and have done for years, and the plan works like a charm; and this is the right way for honey-producers to do.

The producers should know what is a fair, honest price for honey when compared with its cost and the price of other commodities, and it is high time that they demand it. The power to get it lies within their reach; then why not use that power? But, says one, what is a fair price for honey? That, of course, depends upon the kind, its condition, and the supply. It seems to me that 20 cents per pound at retail is none too much, at present, for a good article of white honey in small sections, and a fancy article should command 22 to 25 cents. And 15 cents at retail, is none too much for even good buckwheat honey, in small packages, while 16 to 18 cents per pound is none too much for intermediate grades in good condition. And, further, that 10 per cent., 15 per cent., or even 20 per cent. is none too much for the retail agent to have for his trouble and assistance. The idea should be "to live and let live." The consumer has a right to live, so has the agent, and so likewise has the producer. But, as the matter now stands, the producer has precious little to say about the matter, nor has the consumer. The middleman seems to be, in many cases, the dictator to both parties.

Every important trade or business, almost, has an organization to control it, to limit production, or to *fix* prices, but the honey-producers have none! And why not? Simply because there has been no proper effort on their part in that direction. They can and should have such an organization if they will. But how? Read the editorial on organization on page 723, then think about it, and then you may be ready to act intelligently and speedily. A honey-producers' organization of the United States is a move in the right direction, and one that the writer has been advocating, in a quiet way, for several years.

And now a few words about the commission men and the bee-papers: I claim that commission men have no right, legal or moral, to the free use of a whole column, or even a part of a column of our bee-papers. Their occasional and semi-occasional "reports" of the honey markets are a *curse* to honey-producers, and are nothing more nor less than a *free* advertisement for themselves. If they wish to advertise their calling and place of business, let them pay for the privilege as other people do. There are many reasons why the wholesale commission dealers are a *curse* to honey-producers; why they should have no right to a free use of our bee-papers; and, in fact, why they should all, without exception, be rigidly excluded from the use of even the advertising columns! I will not now attempt to give all the reasons, but will content myself at present by giving only one or two.

They are to a great extent responsible for the present low prices that prevail everywhere for honey. In short, they *fix* the price for honey, and fix it to suit themselves. They seem to care but little for the profits and welfare of honey-producers. Their chief interest in the transaction, between the honey-producer and the retailer, is simply their commission. They cut and make prices simply to make sales and to get ahead of their rival commission neighbor. Having been in the honey traffic more or less for the past thirty years—producing, buying and selling, but never on commission—I happen to know that my statements are true. But the commission men are not alone to blame. The honey-producers are equally to blame. They have permitted the wholesale commission men to fix the prices on their honey for them. But for the present, as in the past, they cannot very well help themselves in case they patronize the wholesale commission men. Being unorganized, honey-producers are trying almost everywhere to undersell each other *at home*, and when they ship their honey away to the large cities, they give the wholesale commission dealers the same privilege.

Now this practice should be changed to one based on sound business principles. But I see no way to do this without an organization of the honey-producers, to be known and designated, perhaps, as the "United States Honey-Producers' Association," or by some similar title. The times demand such an organization. Then why not have it soon, and before we produce another crop of honey to be demoralized in prices like the present one? I for one am not in favor of waiting until the next meeting of the North American Bee-Keepers' Society before we make an effort to better our condition as honey-producers. I therefore move that we have a convention of honey-producers *the present winter*, for the express purpose of organizing a honey-producers' association. And why not have the meeting in Chicago? that city being perhaps as central as any. Who will second the motion?

St. Charles, ♁ Ills.

[For editorial remarks on the above, see page 771.—Ed.]

For the American Bee Journal.

The Iowa State Convention.

The Iowa State Bee-Keepers' Association met in the association's tent on the State Fair Grounds at Des Moines, Iowa, on Sept. 7, 1886, at 2 p.m., with O. O. Poppleton in the chair. Many questions of interest were asked and answered, after which the convention adjourned to meet in the evening.

The evening session was devoted to a general discussion of various important questions, and was greatly enjoyed by all, and adjourned to meet again at 9 a.m. on Sept. 8.

On Sept. 8, at 9:30 a.m. the annual election of officers took place, which resulted in the election of J. F. Spaulding, of Charles City, for President; Dr. Jesse Oren, of La Porte

City, Vice-President; Joseph Nysewander, of Des Moines, Treasurer; and A. J. Norris, of Cedar Falls, for Secretary.

It was voted that the executive committee be instructed to form a new constitution and by-laws, and present the same at the next meeting for approval. An essay was then read by Mr. Spaulding, making clear several subjects of much interest, and several questions were asked and answered in the afternoon, and a social time generally was enjoyed by all.

Alsike clover was discussed with much favor. The meeting continued for three days, and all seemed to express the thought that it was time well spent. A majority of the members desired that when a member became delinquent in dues, he should not be considered a member until the $1 was paid. Twenty-seven joined the association and paid the required dues.

The year's record of bees and their products was gathered by a committee, as follows: Number of bee-keepers present, 40; number of colonies, fall of 1885, 2,174, and number taken from winter quarters in the spring of 1886, 1,819; number on June 1, 1,914. Pounds of comb honey taken, mostly in one-pound sections, 99,500; pounds of extracted, 83,200; honey sold, 54,400. Average price received for comb honey, 14 cents per pound; for extracted, 7 cents. Number of colonies at present, 3,187; and average number of pounds per colony, spring count, 101⅔.

After a thorough discussion of nearly all the leading questions in bee-keeping, the executive committee were instructed to appoint the time and place for the next meeting, until which time the convention then adjourned. A. J. Norris, *Sec.*

For the American Bee Journal.

Legislation for Bee-Keepers.

JAMES HEDDON.

In response to Dr. Miller's candid article on page 742, I believe I can answer the argument which he makes against my views, by stating a fact which I believe nearly all who read this will admit, viz: that it is not always right, wise, nor feasible to work for right and justice through the channel of legislation.

My knowledge of the principles of common law is not very extensive, but I will venture the assertion that if we as bee-keepers desired to bring ourselves into bad repute with the legislators of our Nation, we could not do it faster than by asking them to enact such laws as are referred to in the resolution placed in the hands of the committee, to which Dr. Miller refers. There are thousands of reforms needed—reforms that would put justice in the place of injustice, that it would be very unjust to inaugurate by legislation. I will give just one example to illustrate, as follows:

Nervous dyspepsia is a most prevalent and immoral disease. It makes bad fathers, mothers, husbands and wives; begets impatience and cruelty towards children, hard feelings between neighbors, and becomes a great leader to alcoholic intemperance. We all know that the great cause of this happiness-and-morality destroying disease, is over-eating, or indulging one of the passions beyond the sanction of reason. Now, no one would be insane enough to ask legislators to create statute laws directing how, at what time, and what quantity we should eat. It is one of the very many wrong conditions that it would be nothing more nor less than a crime to attempt to correct by legislation.

It is my opinion that whoever will present this proposed legislation to an able lawyer will first receive a smile in return. I am as full in the faith to-day as at the time I wrote my article on "Priority of Location," that the position taken in that article is just, practical and best.

Perhaps in the above I have not made clear my answer to all of the doctor's questions. To have an exclusive right and do the greatest good to the greatest number, that right should be in possession of the best fitted to survive in our pursuit, and it is in just such hands that it will ultimately fall, if it is not tinkered by legislation. Now, does the Doctor get my idea of the relation between a condition of bee-keeping that will result in the greatest good to the greatest number, and the question of the survival of the fittest? "Priority of location" gives one a natural right provided he is fitted to hold that location, and I wrote that article with the endeavor to fit those who read it to hold their locations against the "interloper." I pictured the natural right of priority in order to inspire the reader to fit himself to hold it, thus giving him a right to hold it in a broad as well as a narrow sense.

Let me illustrate what I mean by a broad and narrow sense: A wealthy gentleman purchases 100 acres of land, paying all cash and receiving a clear title for the same. He at once erects an impenetrable fence around it and makes it a driving-park in which to speed his fast horses and entertain his profligate friends. The country in which this is located is thickly populated, and people are destitute of the necessary products of the soil. Thousands are sitting outside this fence, hungry and cold, begging leave to till the soil. Now we all know that in a narrow sense the gentleman owns that 100 acres, but there is a grander and broader sense in which he has not a moral tax-title to even a bowlful of dirt.

I have two apiaries in different locations, and to-day both of these localities are clear of other bees. I have no fears but that they will remain so, except as now and then some person will be unwise enough to start up, and not having astuteness enough to "catch on" to the weakness of such an attempt, will soon learn it by sad experience, as have three or four persons who have already tried it in as many instances. I have kept matters, in these locations, in the above healthy condition by practicing what I preached in the "priority" article referred to.

I hope I fully appreciate the spirit of the Doctor's arguments, and I trust that he will take my reply in the same spirit, for in such it is surely meant. Yes, let us hear from Lawyer R. L. Taylor.

Dowagiac, ♀ Mich.

For the American Bee Journal.

My Experience with Carniolan Bees.

C. G. BEITEL.

I wish to say a few words about the Carniolans, a race of bees which, I think, is not yet properly appreciated or understood, and in some instances is, for interested motives, purposely maligned.

In the spring of 1885 I ordered a Carniolan queen. In reply I received a postal stating that owing to the poor satisfaction they had given to his customers, the dealer quit rearing them. This was, however, not satisfactory to me—I had read too much about them, and I determined to try them myself, and consequently hearing that another bee-keeper was selling these queens, I ordered one, which I received on June 15, 1886, and at once introduced her to a 3-frame nucleus of Italians.

They bred very fast, so that by Aug. 17 they cast a fine swarm. Of course this was rather late, but I blamed myself some for it; report had it that the Carniolans used up all their surplus in rearing young, and I would occasionally feed them unfinished sections, which, no doubt, stimulated them to swarm, but I hived them back, first removing all queen-cells, and giving more frames. They at once went to work with renewed vigor, and have been satisfactory ever since.

At the beginning of the present month (November), while overhauling my colonies preparatory to packing for winter, I had opportunity to compare their conditions, and while I have Italians, Albinos, Syrians and blacks in all their purity, and hybrids and crosses of every description, not one could show as much honey as the Carniolans; they were strong in number, and their hive was solid with honey from side to side, in combs nearly as white as snow; there was no soiling of the combs by the bees running over them, and I thought that like the cleanly house-keeper, they wipe their shoes before they enter the house. I attribute this to the fact that they use little or no propolis. They are not as bright in color as the Italians, and therefore, perhaps, not as attractive to a casual observer, yet to my eyes they are beauties, and answer all the points given by Mr. Frank Benton and others; and as for docility, they are superior even to the gentlest Italians.

Their frequent swarming, so much urged against them, I think not a serious fault, for they are more easily manipulated than most others. I would rather handle 10 colonies of Carniolans than one of hybrids.

It is true that I got them rather late, and could not test their honey-storing qualities—for I take all my sections off about the middle of July, and do not care for fall honey, leaving that for the bees to winter on; but so far as my experience goes, I am sure that owing to their prolificness, docility, beauty, and white-comb building they will play a prominent part in the future.

Next to Carniolans I find the Syrians the best honey-storers, but they are so nervous—the least jar will start them, and often make things very unpleasant; but of all the nasty, vicious creatures under the sun, the offspring of a Syrian queen mated with a black or hybrid drone is the worst.

Easton,o+ Pa.

For the American Bee Journal.

The Non-Swarming System.

VICTOR W. CLOUGH.

It is just as natural for bees to swarm as it is for birds to build nests and rear their young. This is the way Providence provided for bees that they might not become extinct. But I know by experience that bees placed in a rightly constructed hive, with a certain number of cubic inches to fit its colony in the brood-chamber, and plenty of surplus room on top (never at the side), will not swarm.

I am convinced that the cause of swarming is mostly in the construction of hives. Not one in a hundred are made to produce the effect desired. Hives should be constructed with two entrances, one for the bees to cluster at (if at any time the colony becomes crowded from neglect to place on surplus room), and the other for the workers to pass in and out without having to crowd through 2 or 3 inches of bees. I believe that the brood-chamber should never be disturbed after the season for honey-gathering has commenced, if bees are expected to gather a large surplus. It disturbs and hinders the bees more or less, the same as it would if we had our home disturbed by a wind-storm, consequently we would very naturally stop our business and "fix up;" just so with the home of the bee.

I use a non-swarming hive, and in it I start the bees at work in a case of 40 sections. After the bees have this case two-thirds full, I raise it up and place under another case, and when two-thirds full I raise the two cases and place under another; when this case is two-thirds full, the top case will undoubtedly be all finished, and can be taken off, but at the same time the two remaining cases must be raised and under them placed another. Continue to do so all through the season, and when the season is over there will be a harvest of from 200 to 300 pounds of honey, without any increase.

Geneseo,⊸ Ills.

For the American Bee Journal.

Views on Legislation for Bee-Keepers.

DR. C. C. MILLER.

I send herewith a letter from Mr. O. B. Barrows, of Marshalltown, Iowa, giving his views on the matter of legislation, for which he has my thanks. I hope we shall hear from others, and if they will send direct to the editors, the general readers will the sooner see their writings. The following is Mr. B's letter to me:

"I see on page 742 of the BEE JOURNAL you ask for bee-keepers' views on the subject of legislation to create a sort of pre-emption to certain territory for bee-pasturage. I have been keeping a few bees for a number of years, but not having sense enough to increase my bees to use all the pasturage, my neighbor, Mr. Pinkerton, stepped in, and being a smarter man than I am, has outstripped me in the race, and now has 170 colonies of bees, which is nearly twice as many as I have, and some others in this town have a few, and still not bees enough to gather all the nectar.

Now the question is, because I have been keeping bees longer than my neighbor, and still have not gumption enough to keep enough bees to gather all the honey, should Congress step in and debar him? or should Congress say, 'Let the man keep bees who can make a success of it? Let him produce honey who can produce it the cheapest? Let him who cannot enter a fair competition with his neighbor, retire on the principle of the survival of the fittest?'

"These are my individual opinions, but I expect sooner or later complaint will be made against my keeping them within the corporate limits, on the ground of their being a nuisance, and while I do not believe that they are a nuisance, I shall rather sell out or move than contest it. Remember, I only represent *one*.

"I notice that some of the bee-keepers are complaining of others putting the price of honey down. It seems to me that they might have Congress pass a law similar to what the general court did at an early day in Connecticut, that persons living within a certain distance of Norwich should receive a certain price for their wheat, and the further they lived from that point the greater the price, so as to compensate the remote farmers for drawing their wheat to market.

"When I learned that one of our grocers had bought 1,000 pounds of good comb honey, and was retailing it at 10 cents per pound, so that a man who worked ten hours for $1.50, could take home 15 pounds of it for his day's work, and say, 'Wife, this is not a luxury, but is as cheap a dessert as I can buy; let the children have all they want of it,' I was rejoiced. And when two or three tons were rapidly sold in this town (not to a monopolist to hold) to poor laboring people, to eat on their tables, I felt glad that the bee-business had come to that state of perfection when this could truly be called a 'Land flowing with milk and honey;' and when a lawyer asked me if my honey would keep, I was glad to say 'no,' they eat it up and come back for more."

Marengo,♂ Ills.

For the American Bee Journal.

How to Build a Bee-Cave.

J. W. BITTENBENDER.

Mr. Gates said at the meeting of the Western Bee-Keepers' Association of Iowa, that it would cost $500 to build a cellar to properly winter 200 colonies of bees. As a cave is much preferable to a cellar, and the cost of it would be within the reach of a great many bee-keepers, I will give the way my cave is built, and the cost of all the material in it. This cave is made the same as Mr. B. F. Woodcock's, who has wintered bees very successfully, not losing a single colony out of 70.

My cave is 8x20 feet in the clear, and was made by first excavating a hole in the ground 10 feet wide, 22 feet long, and 3½ feet deep, and an entrance way 4 feet and 10 inches wide, by 6 feet long, and 3½ feet deep. The drain of not less than 3-inch tile was then put in, and also a sub-earth ventilator of not less than a 4-inch tube or tile, and which is 60 feet long, and 3½ to 4 feet deep under ground, coming up out of the ground at 60 feet. A stone wall a foot thick is placed all around the cave, and a 10-inch wall in the entrance way; this gives a 3-foot stairway.

The side wall is 5 feet high, and on a sill 6x8 inches square and 22 feet long is the door-frame, made of 2x10 inch plank, with a top bearing 6x12. The door-frame is to be 2 feet and 10 inches wide and 6 feet long in the clear, and the door-cap to project 6 inches on each side. The gable ends are built 3 feet higher than the top of the sills; the side sills are to lay on the side wall even with the outside of the wall. The entrance front is to be 4 feet high at the front, tapering up to the lower edge of the door-cap. A piece 2x10 inches and 4 feet long is then laid on the front entrance wall, and then pieces 4x8 from this piece to the top door-cap, nailing and spiking it well.

Cut the rafters to fit on the inside of the gable ends, and have the same pitch as the wall, so the sheeting reaches or lays on the wall. Cut the end of the rafter to a point to rest on the sill without a shoulder; set the point of the rafter to the outside edge of the sill, the rafters to be made of 12x6 inch lumber. If the rafters are cut right the inside edge will project inside 4 inches, even with the wall. The wall will be 4 inches wider than the sill, if the sill is placed as I have directed. Brick is walled in this space, set on the edge, which will make a dead-air space of 2 inches to prevent frost.

Suppose the rafters to be placed 3 feet apart; then nail collar pieces on them 18 inches above the sill (fencing will do for this), but be sure to have them true or in line, as the ceiling is to be put on this. Now, do not put on the roof yet, for you are to work from the inside to the outside. Ceil this in the inside with shiplap (as I prefer this to plastering), and when the ceiling is on, to get an inch air space, nail inch strips to the edge of the rafters, and cut inch-boards just so they will go in between the rafters and rest on this inch strip, which will make an inch of dead air space. Put heavy paper on this. Procure sawdust and lime and make a mortar; this lime will preserve the sawdust. Take 3 parts of sawdust to one part of lime, slake the lime, put in 4 buckets of water to one of lime, mix the sawdust in and get it as stiff as you can; raise the mortar-box higher at one end, scrape the mortar to the higher end, and let the water drain off. Make a stamper and spread the mortar on between the rafters 3 inches thick; when stamped down well, here you get another dead-air space of an inch.

Now put the sheeting on like a floor, and heavy roofing paper over the sheeting. It is then ready for the shingles, every layer of which is to be painted, and on the roof two coats of paint after shingling.

I omitted telling about the ventilation. Put a ventilator 5x6 inches in size in the inside, made of boards. Nail it to the rafters before you put on the ceiling, letting it project 6 inches in the inside, and let it stick out above the roof 18 inches. To anchor the sills to keep them from spreading, put a ⅝-inch iron rod in the wall at each end. If you have brick walled in around the sills it is ready for flagging-stone and cement. Cement the sides first, and then the floor and entrance-way. Put on the inside door and double outside door. Paint the ceiling, doors and all the wood-work with two coats of paint. Put in the stairway, bank the ground up to the top sills, paint them well, put conductors on the roof, lay brick around the door-frame to keep the ground away, and you will have a cave that you can control the temperature in, and one that will last a lifetime.

The cost of the stone-work and cementing was $70; roof, shingles, sawdust, ceiling, nails and paint, $30.30; for excavating, ventilator, tiling and tile, $7.90; and doors, hinges and paint, $4.65, making a total cost of $112.85.

When the cave is completed it will be 8x20 feet in the clear, and 7 feet high in the inside, with an entrance-way 3x6 feet. Use for all the best material. Perhaps others can get material cheaper than I did, as all my material was imported and bought of retailers. I have done all the carpenter work, and did not count anything for my labor—it was worth about $10. My friend's cave was not affected when the temperature was 26° below zero. The temperature in my cave now is 45°, with the outside door open, all the ventilators open, and with 115 colonies of bees in it.

Knoxville, ♀ Iowa.

Rural New Yorker.

Inverting the Brood-Nest.

PROF. A. J. COOK.

One of the late innovations in bee-keeping which has gained favor so rapidly that we must think it has come to stay, is that of inverting the frames or hives. In either case the brood-nest is turned upside down. This was first accomplished by so arranging the frames that they could be readily inverted. Instead of the old Langstroth frame with its single top-bar, which had projecting ends, a perfect rectangular frame, with no projecting bars, was made to swing in a larger frame with projecting top-bar and end-bars which reached a little below the middle point of the end-bars of the inner rectangular frame. By use of wire nails the inner frame is pivoted to the outer half-frame, so it can swing in and be inverted in a moment at any time. I have used these frames now for two years, and like them so well that I am changing all my combs into these reversible frames.

Within the last two years an attempt has been made to improve upon this plan by inverting the entire hive, which is about the size of the common Langstroth hive, and consists of two horizontal sections, which can be used either independently or together. Thus it will be seen that the frames in this hive are only about half as deep as those of the usual Langstroth. These frames have close-fitting end-bars, and when put into the hives, rest on tin projections, which are tacked to the bottom of the end-boards of the hive. When all the frames are put into the hives, a wooden thumb-screw which is set in the side-board of the hive opposite the end-bars of the frames, is screwed up. This holds all the frames firmly, and so when these screws are thus turned the frames are all held securely, and the entire hive can be turned bottom up in a moment.

The advantages of inverting are: 1. Combs are built and fastened to the frames on all sides. Every bee-keeper knows that bees always fasten combs firmly at the top and along the upper half of the edges. When this is once done we have only to remove the frames, when the union is made complete about the whole margin of the comb. The advantages of such entire union are, that the combs are held securely, and are in no danger of falling out when extracting or shipping bees.

2. The spaces between comb and frame which serve as hiding-places for queens are removed. This last is a great gain, as any one who has sought for queens is aware.

3. Reversing frames places the honey below the brood, which is unnatural. Hence, if just as the season opens, when we place the sections on the hive, we reverse the frames, the bees at once carry the honey above the brood, or into the sections where we wish it, and once employed in filling the sections they make no halt till the season closes. If, when we reverse we uncap some of the honey, we will hasten this rush to the sections. Many who have been annoyed at the persistent refusal of their bees to work in sections, will appreciate this argument in favor of reversible frames, though to the expert apiarist this is the weakest argument.

4. When a bee-keeper has all the bees he wishes he can preclude swarming by this simple work of inversion, which, in case the hive is reversible, is but the work of a moment. Curious as it may seem, the bees at once cut away or remove all queen-cells as soon as the combs are turned upside down. Thus by inverting the hives each week swarming is prevented, and all but the work of a moment.

Of course this last, and indeed all the points, argue loudly in favor of the reversible hive. To invert a hive takes a moment; to reverse all the frames is the work of several minutes.

Agricultural College, ♀ Mich.

For the American Bee Journal.

Selling Honey in Home Markets.

CHAS. WALKER.

On March 20 I took 48 strong colonies from their winter repository, leaving the packing on them until about May 8, when I cleaned out all the chaff. I then examined them and found all in the finest condition possible, not even losing one queen. On May 18 I was surprised at seeing the first swarm issue, as it was about 3 weeks earlier than usual. I increased the 48 colonies to only 75, as their whole aim seemed to be the storing of honey. I have secured 4,080 pounds of comb honey, and 500 pounds of extracted. No account was kept of the amount sold at the honey house, so my total crop must have been some over 5,000 pounds. I am satisfied with the season's work, even if the prices obtained for honey are very low.

Our markets are mainly governed by supply and demand, but our home markets are chiefly influenced by ourselves, and I am sorry to say they are indeed poorly controlled. For instance: I procured a honey-extractor, intending to produce and sell extracted honey at 8 cents per pound; but I found to my surprise that one of my neighbors was selling the same kind of honey at 4 cents per pound. I sold a little for 5 cents per pound, and then raised the price to 8 cents, and I am now selling as much for that price as I did for 5 cents. It was an imposition on our grocers, for they cannot sell a gallon of syrup when honey sells so cheap. Honey cannot be produced in this State for 4 cents per pound. I can retail all I have at 8 cents before next spring.

My bees are in the cellar, with a good fire over them, and they are perfectly quiet. The cellar has two ventilators, so at any time a current of fresh air can circulate through it, being so arranged that it can be governed by a slide from the inside of the cellar.

Bravo, ♀ Mich., Nov. 29, 1886.

Local Convention Directory.

1886. *Time and place of Meeting.*

Jan. 11-13.—N.Y.State, E.N.Y., &c., at Albany, N.Y.
Jno. Aspinwall, Sec., Barrytown, N. Y.

Dec. 14.—Keystone, at Scranton, Pa.
Arthur A. Davis, Sec., Clark's Green, Pa.

1887.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

Jan. 13.—Vermont, at Burlington, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Jan. 18.—N. W. Ills. & S. W. Wis., at Rockford, Ills.
J. Stewart, Sec., Rock City, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Keeping Bees in a Warm Room.—A. T. Aldrich, Wilcox,♂ Pa., on Nov. 26, 1886, writes:

Last year I gave an account of my experience in keeping bees in a warm room. Another year has passed and the same colony stands at my desk within 2 feet of my elbow, where it has stood for three years and a half, the brighest and best of all my colonies. I have had no carrying into the cellar, no packing, no feeding, no anything—I simply let them alone except to put on and take off sections. The temperature ranges, during winter, from 30° to 70° above zero, and the bees are always quiet and consume but little honey; they are strong in the spring, and the first to cast a swarm. This colony gave me, the past season, 114 pounds of comb honey in sections; also an early swarm which gave me 67 pounds, making 181 pounds, spring count. I am aware that old bee-men who live in more favored localities will laugh at this, but when we consider that no other of my 25 colonies gave me one-half that amount, the showing is not so bad. As a further test I have placed two weak and two medium colonies in my kitchen chamber, where it is always warm, hoping to be able to give a good account of them next year.

Bees did Well.—David Watterson, Bristow,♂ Iowa, on Oct. 31, 1886, says:

My bees did very well the past season. I had 12 colonies to begin with, and increased them to 28 by natural swarming, besides taking 800 pounds of honey. I had one colony that swarmed four times, and got 110 pounds of honey, besides having plenty to winter on.

Preparing Bees for Winter, etc.—E. Pickup, Limerick,♂ Ills., writes:

After "endowing" La Harpe College with 25 colonies of bees, I had 16 colonies left in the spring to begin this season with. I increased them to 40, and had one ton of honey. The colony that did the best cast 2 swarms, and produced 300 pounds of honey, spring count. Ventilation, shade and tiering-up keeps back swarming. One-third of my colonies did not swarm, and 26 others that I took care of increased to 70, and I took from them nearly 1¼ tons of honey. For the winter I have packed 40 in the sawdust and clover chaff all around, and a little board with a cleat under each end to keep the entrance open. I have 16 on the ground without bottom-boards, packed in sawdust, entrances open; and 16 with wind-breaks, and the caps full of oat-straw, and the rest in a bee-house which has double doors, double windows, and is covered so as to make it dark; it is double-walled with 10 inches of sawdust between, battened on the outside, and on the inside covered with oiled paper, and lined with shiplap lumber on the paper; on the north and west sides is a one-inch air-space. Yesterday the temperature was 60° outside, and 47° inside; this morning, 34° outside and 46° inside. I owe my success in bee-keeping to reading bee-papers, and making good use of the same. I think the last sentence of Dr. Mason's article, on page 682, is right to the point—much in a "nut-shell."

Honey-Plants from Florida.—A. A. Dodge, Palmetto,♀ Fla., on Nov. 2, 1886, writes:

I send you six different honey-plants, from which I find the bees were gathering honey to-day. We are having fine, sunny days. The thermometer shows 50° lowest, 80° highest. Bees are at work as they would be at the North in the month of July; and appear in the same condition in regard to brood, drones, etc.

[The plants sent are three golden-rods, two asters, and one thorough-wort. It needs not to be said that all are excellent honey-plants. — A. J. Cook.]

Wintering Bees in a Straw-Stack, etc.—Fayette Lee, (126), Cokato,⊙ Minn., on Nov. 21, 1886, writes the following items:

I have taken 2,000 pounds of comb and 3,000 pounds of extracted honey this year, mostly linden honey. I increased my apiary from 95 to 144 colonies. I have sold some, so I now have 126 colonies in the cellar. My honey is nearly all sold at home at 15 cents per pound for comb honey, and 9 cents per pound for extracted. When I say at home I mean that I have not gone 7 miles away from my apiary. I would say, let the Bee-Keepers' Union set the price on honey, and all sell at that price, then all will know what the price of honey is. When the Union takes this step, then it can have my $1.25 and my help. I find in some of my colonies brood in all stages in from 1 to 3 combs. Does the queen lay every month in the year? It looks as if she does. They are Syrian bees. That good flavor which comb honey has is from the wax or comb, and not put in by the bees' sting. If you take a section that is full of honey, and not capped, and put it in a warm room for two weeks, it will have the same flavor that sealed honey has; extract the sections before it is ripe, or the water out of it, and put it in a jar, and you will see by letting it stand in a warm place three weeks, that it has a flat taste. One of my neighbors put 24 colonies in the middle of a large straw-stack, and they were all dead before March 1. They froze solid, with honey within 2 inches of the cluster. They would be better off in a half-inch nail keg on the bench, for there would be some change in the weather. The black bees are ahead of anything for white comb honey.

The Season of 1886.—J. W. Buchanan & Bro., Eldora,⊙ Iowa, on Nov. 29, 1886, write:

We began the season with 16 colonies, bought 3 more, making 19 in all, which we increased to 33 colonies, and took 820 pounds of comb honey in one and two pound sections. We took 14 colonies on shares, 10 of them being old colonies, and 4 new ones. As it was late in June when we got them, and no sections on, they did scarcely anything. We placed sections upon their hives immediately after getting them home, and got 200 pounds of comb honey, and 7 swarms from them. The drouth spoiled the honey crop in our locality, almost all of our surplus being from white clover in June and the latter part of May. We have 25 colonies in the cellar, and 28 in a cave built purposely for them. We have sold a part of our honey (some at 12½ cents, and some at 15 cents per pound) in our home market, and have 500 or 600 pounds still on hand. We use the "Heddon-Langstroth hive," both 8 and 10 frames. We have our bees all housed for winter.

Managing Robber Bees.—Charles Mitchell, Molesworth, Ont., writes:

I have been watching the bee-papers long and closely for something equal to their depredations, and I have failed; so have all the remedies thus far offered. In consequence of this I will give something which will not fail—at least it has not with me in two years. To distinguish between robbing, and colonies taking a general flight, has cost me more study than any one thing in connection with bees; and unless the reader knows his business, never treat bees for robbing until 10 or 20 minutes after heavy flying, when they will return, light on the hive, and many will fan their wings while traveling in, when all will be over. But robber bees will hover about the entrance on wing with their legs straight out behind, like a crane, lest they get caught by the feet. (This is before they are overpowered.) I am of the opinion that many of those old, shiny bees become "professors," and end their days robbing, even on into a good flow of clover honey. If contracting the entrance in time will not prevent robbing, I let them get in full blast so as to get all those "professors." Have a tent and smoker ready, get the tent over the hive, leave it a few minutes until you get all the bees which are in loading up. Now lift off the tent, having closed the entrance first. By this time all the bees will be back, which were away unloading. Now while they are trying to crowd into the closed entrance, put the tent over them, go inside and raise them with the smoker, and you have nearly all those "professors" and "students." Leave them in the tent, according to the weather, until they are barely able to go home. If they try it the next day treat them in the same manner. Two applications have always disgusted my bees with the whole business. Of course there is generally something wrong—too many combs, too few bees, too black, or being called from home.

Feeding Bees Now for Winter.—Mary E. Hovey, Yorkville,♁ Ills., asks the following :

I have 25 colonies of bees, and nearly all of them are short of winter rations. I shall have to supply about 200 pounds of honey. What is the quickest and best way of putting it into the hives ?

[Get it in the comb, either in sections or frames, or pieces, and lay it on sticks on top of the frames in such a manner that the bees can get at all sides of the combs. Cover all with something to retain the heat, and winter the bees in a repository.—JAMES HEDDON.]

Taste and Odor of Honey.—Elias Fox, Hillsborough,+○ Wis., on Nov. 28, 1886, writes :

I wish to corroborate Dr. J. P. H. Brown's statement on page 745. Neither is this taste and odor confined *entirely* to the stronger flavored plants and trees. In this locality the honey from the white clover is readily detected by the flavor of the plant, as is also basswood honey. According to my judgment, the mildest flavored honey produced in this locality, is detected in the same manner, but of course in a mild form ; and when we come to motherwort and catnip honey the flavor and odor both are *very* prominent, especially the latter ; and no carelessness with the essence bottle, either.

Reversing Sections, etc.—Henry Willson, Clinton,☉ Ills., writes :

I tried reversing sections the past season, but I do not like it. They weigh some heavier, but if they are reversed after the top part is commenced to be capped, the bees must travel over it to finish the other part, and they soil it, making it several shades darker than the last finished. Also, there is often a seam on the line between the capped and uncapped when removed. My experience with bees is contrary to Mr. G. W. Demaree's. I have often noticed that they make more noise during zero weather than in moderate weather, but whether they are exercising to keep warm, or are simply uneasy, I do not know, yet I am inclined to the latter.

Learning to Keep Bees, etc.—Thos. Gavin, of Worburton, Ont., writes :

I commenced in the spring of 1886 with 2 colonies of bees, increased them to 7 by natural swarming, and obtained only about 20 pounds of comb honey from a first swarm. Can one who never saw bee-keeping carried on, and obtained all his information through bee-papers and bee-books, keep bees as successfully as one that has served an apprenticeship with a successful apiarist ?

[It can be done, but good, practical lessons would be invaluable to such a beginner.—ED.]

Convention Notices.

☞ The Keystone Bee-Keepers' Association will meet in the Court House at Scranton, Pa., on Tuesday, Dec. 14, 1886, at 10 a.m.

ARTHUR A. DAVIS, *Sec.*

☞ The eleventh annual meeting of the N. W. Ills. & S. W. Wis. Bee-Keepers' Association will be held in the Grand Army Hall in Rockford, Ills., on the third Tuesday in January, 1887. There will be a two days' session. J. STEWART, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 11, 12 and 13, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised. An unusually brilliant programme will be prepared and announced later. JNO. ASPINWALL.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows :

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so ? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year ? When you do so, please select any 25 cent book in our list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887, —will you not assist us to obtain them ?

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax :

CHICAGO.

HONEY.—It has sold better during this month than at any time since the new crop came on the market. Yet prices are not any higher, sales being made at 11@12c. for white honey in 1-lb. sections. Fancy sections of less than 1 lb. in weight, at 13c. Extracted is unchanged in tone or values, being 5@7 cents per lb.

BEESWAX.—23@25c. R. A. BURNETT,
Nov. 9. 161 South Water St.

NEW YORK.

HONEY.—Sales for comb honey the past month have been good, and prices fair. Large shipments from the West are coming in more freely than we anticipated. Present quotations are as follows : Fancy white in 1-lb. sections, clean and neat packages, 13@14c.; 2-lbs., 11@12c.; fair to good 1-lbs., 11@13c.; 2-lbs., 9@10c.; fancy buckwheat 1-lbs., 9@10c.; 2-lbs., 7@8½c. White clover extracted in kegs and small barrels, 6½@7c.; California extracted in 60-lb. cans, 5@6 cts.; California comb honey in 60-lb. cases, 10@14c.

BEESWAX.—Prime yellow, 22@24c.
McCAUL & HILDRETH BROS.,
Nov. 13. 34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.
BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—All kinds of honey are dull and lower. Best white comb honey in 1-lb, sections, 11@12½c. Extracted, 7@9c.

BEESWAX.—23c.
Nov. 23. M. H. HUNT., Bell Branch, Mich.

CINCINNATI

HONEY.—There is a lively demand for table honey in square glass jars, and the demand for nice comb honey is very good. Demand from manufacturers is slow for dark grades of extracted honey. The ranging prices for extracted is 3@7c. a lb. Nice comb brings 12@15c. per lb. in a jobbing way.

BEESWAX.—Home demand is good. We pay 20@23c. per lb.

Nov.10. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—The market is not very active and prices a little lower. Choice 1-lb. sections of best white sell at 13@14c.; second grade 1-lbs., 10@12c.; choice white 2-lbs., 11@12c. Extracted, slow at 6c.

BEESWAX.—Scarce at 25c.
Nov. 17. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.
Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The market remains firm for choice qualities, of which we have a large supply on hand. We quote from 3¾@4¼c. wholesale, for extracted honey ; and 8@12c. for honey in 2-lb. sections, although the latter sells only in a jobbing way at outside prices. Some fine honey in 1-lb. sections sells at 11@12c.

BEESWAX.—Dull at 20@22c. for the best.

Nov. 24. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.
Oct. 18. O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¾c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c. Market dull.

BEESWAX.—Dull at 20c. for prime.
Nov. 17. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand is good for all grades, and receipts have been very large of comb and extracted. Home bee-men have kept out of the market until this month ; having glassed every lb. section on both sides they are reducing prices, selling 60 lbs. of glass with 160 lbs. of honey, making our market lower. There crop is about 70,000 pounds. We quote : White clover 1-lbs., 12@13c.; 2-lbs., 11c; ½-lbs., 13@14c.; dark 1-lbs., 10c.; 2-lbs., 8@9c.—California 2-lbs., 9@11c. Extracted white clover, 6c.; dark, 4@5c.; white sage Calif., 5½c.; amber, 5c.

BEESWAX.—22c.
Nov.20. CLEMONS, CLOON & CO., cor. 4th & Walnut.

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OLDEST BEE PAPER IN AMERICA
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BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

* * *

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

* * *

Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

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* * *

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with $4.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

* * *

To all New Subscribers for 1887 we will present the rest of the numbers for 1886; so the sooner they subscribe the more they will get for their money.

* * *

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

* * *

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

* * *

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

* * *

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

* * *

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

* * *

In these Days, when out-door sports are so generally cultivated, many will read the article "Why we Canoe," by W. P. Stephens, in the December number of FRANK LESLIE'S POPULAR MONTHLY, and some at least will be tempted to try an amusement so exhilarating and attractive. "A Winter in Jamaica" is a sketch of West India travel, very prettily told, and like the other articles in the number, well and attractively illustrated. Arthur Dudley Vinton tells the story of "North American Earthquakes." "The Fisher-girl of Grand Menan," "Two Inspirations," "Shadow or Substance?" and other stories in this magazine, justify its title of the "Popular Monthly."

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

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* * *

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

* * *

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.25.

* * *

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

* * *

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

* * *

The Report of the Indianapolis Convention is now published in pamphlet form, uniform with that of last year. It will be sent postpaid for 25 cents to any address.

We have also bound it up with last year's, together with the History of the Society; this we will mail for 40 cents. Or if you send us one *new* subscriber (with one dollar) besides your own renewal, we will present you with a copy by mail.

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P.S.—Send 10c. for Practical Hints to Bee-Keepers

HUMPHREYS'
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In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

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SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—**Humphreys' Medicine Co., 109 Fulton St., N. Y.**
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BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

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Sole Manufacturers,
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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every Week, at Ten Shillings and 10d. per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN BEE JOURNAL, one year, for $2.75.

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It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, $1.00, postpaid.

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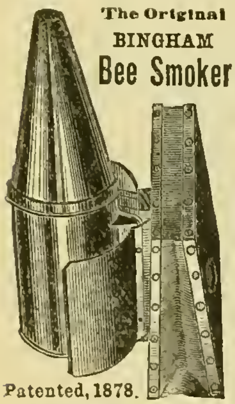
The Original
BINGHAM
Bee Smoker



Patented, 1878.

ADDISON, Vt.—Have one of your smokers good yet—used 6 years.
E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet.
F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am *boss*—Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.
G. M. DOOLITTLE.

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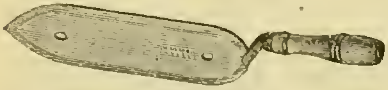

Patented May 20, 1879.

BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
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TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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Send for Samples & Reduced Price-List.
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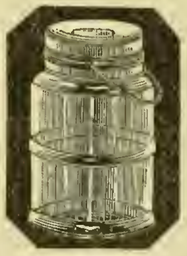
GLASS PAILS

FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen	.....	$1.60
" 2 pounds " "	.....	2.00
" 3 " " "	.....	2.50

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases,
Entrance Feeders, Top and Bottom Feeders,
Hive-Lifting Device, Honey Extractors,
Wax Extractors, Comb Foundation, etc.

☞ My new Illustrated Catalogue is now ready, and will be mailed to all who may apply for it. Address,

10A1y **J. M. SHUCK, Des Moines, Iowa.**

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
11Atf DUNDEE, Kane Co., ILLS.

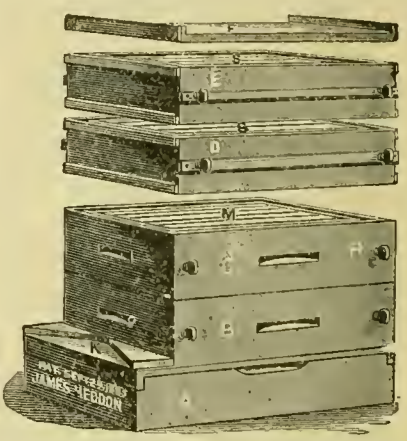
WEAK MEN MADE STRONG

All men seeking Health, Strength and Energy should avoid drugging the stomach and send for **Prof. MARSTON'S TREATISE,** which is published especially in the interests of those who are **Weak, Nervous** and **Debilitated.** If you have been drugged and humbugged send at once for this **FREE BOOK,** Replete with information of value to young and old men.

THE MARSTON CO. 19 Park Place, New York.
46A17t

The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

THOMAS G. NEWMAN & SON,
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WANTED, an active, reliable man in every city and town in the State of Illinois to work up Councils of the American Legion of Honor, an insurance organization now having 60,000 members, and we are willing to *pay liberally in cash* for services rendered in this work. It can be performed at odd and leisure hours without interference with regular business, and is an occupation affording much pleasure to those engaged in it. For full explanation how to go to work and what to do, address

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILLS.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Dec. 15, 1886. No. 50.

Fifty-Two Dividends from the investment of one dollar is just what every subscriber of the AMERICAN BEE JOURNAL receives. Can any better interest be found for the investment of one hundred cents? If so, where?

Do not Ship honey to any one without first looking up their commercial standing, unless you know it without looking it up. There are many who are now mourning the fact that they did not do so.

Mr. L. J. Diehl, Butler, Ind., reports that he has increased his bees from 71 colonies last spring to 273 colonies this fall, and obtained a ton of comb honey from them; he allowed natural swarming.

G. M. Doolittle, Borodino, N. Y., in a kind letter to the editor, expresses these sentiments:

> I think the AMERICAN BEE JOURNAL grows better each year, but I realize that your care and management is required to secure a continuance of this—so please to take care of yourself as much as possible, for we can spare none of the good qualities from the *best* bee-paper in the world.

Honey-Producing Plants increase in a locality in proportion to the increase of bees, which cause a fuller fertilization of the flowers—therefore, the one who keeps bees in a locality is a public benefactor, and the bees are not only *not a nuisance*, but are a blessing to any community.

We are Sorry to learn that Mr. L. C. Root, of Mohawk, N. Y., is obliged to move to a location near salt water, on account of his health; and hence desires to sell his excellent location for honey-production near Mohawk.

Preserve your Papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one FREE if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

Concerning the Canadian lawsuit, Mr. Holtermann remarked:

> How far we in Canada have supported the Union I know not; probably not as we should.

We replied, on page 739, that there were only two members of the Union in Canada, and that the person sued was not a member of the Union; then, to show that Canada had not considered itself apart of the "National Bee-Keepers' Union," and therefore not entitled to its protection, we innocently remarked that

> The "only bee-paper in Canada" has never thought enough of the Union to mention "its aims and objects;" neither have its proprietors ever offered to become members.

In stating these facts we had not an unkind thought or feeling either towards Canadians or their paper, but the latter, in its last issue, takes umbrage at it, and remarks thus:

> It was nothing more or less than an opportunity for venting the ill-feelings of the editor towards this *Journal*.

Well! That is sublime! In the first place we had no "ill-feelings" towards our Canadian cotemporary; and, secondly, we had no desire to "vent" what we did not possess, whether an "opportunity" was presented or not!

Our neighbor will do well not to indulge in any such thoughts or feelings. It does not in any measure stand in the way of the AMERICAN BEE JOURNAL; our list of subscribers in Canada is larger to-day than ever before, and while we heartily wish the Canadian paper all the prosperity it desires, we must protest against its being jealous of the prosperity of the oldest bee-paper in America. As well might a child be envious at the popularity of its father, or jealous of the good fortune of its mother!

The Triple Convention at Albany, N. Y., will be held on Jan. 11-13, instead of a week later, as at first stated. This will be a union convention of the New York State, the Eastern New York, and the New Jersey and Eastern associations. Every one who can do so, should attend this very important meeting.

More Premiums.—Mr. L. J. Diehl, of Butler, Ind., offers a colony of Italian bees as a present to the person sending to this office the largest club of subscribers for 1887. The subscriptions may be sent in at any time before the first of May at our regular club rates, and additions made as desired, but it must be stated that you are working for that premium, so that we can keep account of the subscriptions.

As a premium to the second largest club we will send my mail, postpaid, a copy of the "Farm Account Book," worth $3. The postage is 20 cents.

New Subscribers are coming in rapidly—for this our thanks are tendered to the friends of the AMERICAN BEE JOURNAL, who are exerting their influence in its behalf. We should thribble our list at the present low rate of *one dollar a year*. We hope every one of our present subscribers will send at least one additional subscriber with the renewal for 1887.

The Ontario Bee-Keepers' Association will hold its annual convention at Toronto, on Jan. 5 and 6, when the commissioners will report their trip to Europe. Speaking of the important matters to come before the meeting, the *Canadian Bee Journal* advises the formation of a "Union" for Canada. It says:

> Another thing which late occurrences have made necessary, will be the discussion of the advisability of taking active steps towards the establisment of a "Bee-Keepers' Union," or of making the protection of bee-keeping interests a branch of the association. It is to be hoped that the meeting may be held, and some decisive steps taken to put the case of Mr. Harrison in its proper light before the judges, in time to prevent a decision adverse to the best interests of bee-keepers. Let there be a rousing meeting of the whole bee-keeping fraternity, and general good will be the result.

In the same paper, Mr. Allen Pringle says that Canadians must act with "prudence, promptness and energy," and combine to defend the suit. He then adds:

> And it is always more prudent for the bee-keeper to mollify and placate an unreasonable or irascible neighbor than to quarrel with him or go to law with him. A "soft answer" and a case of honey will go a great way in turning away the wrath and straighteoing out the crookedness of a captious and unreasonable neighbor. Of course I do not know whether Mr. Harrison's attitude towards his neighbor was prudent or otherwise, but I should judge from his letter that he is a reasonable and fair-minded man. However that may be, his case, though personal to himself, has now become of public and general importance to Canadian bee-keepers, and it behooves us to face the issue without any sign of flinching.

History of the United States, published by the New York *World*.—A copy of this book is on our desk. It contains 320 pages, and is indispensable to every person, as a work of convenient reference. It is illustrated, and the history is brought down to date. This book is offered as a premium with the BEE JOURNAL, and is indeed an elegant—

Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

This "History" will be sent FREE by express at the subscriber's expense; or will be mailed for 10 cents extra to any place in the United States or Canada.

It is arranged chronologically by years, from 1492 to 1885. Every event is narrated in the order of its date. These are not confined, as in other works, to political matters, but embrace every branch of human action.

This premium is worth the whole of the money sent for both periodicals, and should induce thousands to subscribe, and thus get two unrivalled weeklies for nothing.

This offer is good **only until Jan. 1, 1887**, hence no time should be lost. Send at once!

We anticipate a largely increased list of subscribers for 1887, as $1.00 cannot be invested by any bee-keeper that will bring him better returns.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Queen-Traps to Prevent Swarming.

Query, No. 347.—Having plenty of bees, and not desiring any increase, but to obtain the most honey, what would be the result if queen-traps were used to prevent swarming, during the swarming season?—"Butler."

Queen-traps will not prevent swarming, and as a rule would result in loss in the hands of the inexperienced. It would be better to let them swarm and double them up the next spring to hold the numbers back.—G. M. DOOLITTLE.

I do not think that it would be profitable to prevent increase in this manner. The bees are apt to become "sulky" when their desires are interfered with in this manner. It is better to control or prevent the desire.—W. Z. HUTCHINSON.

Some colonies might be deterred from swarming, but you would find many queens superseded, and swarms would issue with unfertilized queens in spite of your traps.—J. P. H. BROWN.

I should like to know, and have been studying somewhat upon it. I think that the Alley queen-trap might, by a little modification, be made a success, but I have as yet made no experiments.—C. C. MILLER.

They will not prevent the swarming-fever which so demoralizes bees that they work but little. Unless I could keep the swarming-impulse back, I should prefer a swarm, or else such management as would quell the fever.—A. J. COOK.

Queen-traps will not prevent swarming. They will prevent the old queens from going with the first or prime swarms, but after awhile the young queens will begin to hatch, and some of the slender "misses" will slip out through the perforations, and you will have plenty of the meanest kind of swarming. The old queens are sure to perish before the excitement is over.—G. W. DEMAREE.

This can be proved only by testing. The remark that "bees do nothing invariably," applies as closely to this question as to any one thing in bee-management. The use of queen-traps for this purpose has not been a success with myself.—J. E. POND, JR.

Sometimes the old queen is killed after a few efforts at swarming, and again the young queens will be killed. In the former case there would be more ineffectual swarming, the colony finally having a drone-laying queen. I do not think that the most honey could be obtained by such management.—G. L. TINKER.

That would depend upon what sort of a trap you used, and how you used it. It would require pages to tell all that would result from the use of a trap that confines the queen and drones to the hive or trap.—JAMES HEDDON.

◆

Getting Bees from a Bee-Tree.

Query, No. 348.—In case a bee-tree may not be cut, can I in any way secure the bees? I think that I could winter them without any honey from the tree.—S. B. L., Nebr.

It is often possible to cut out the part containing the bees.—A. J. COOK.

Climb the tree, cut out the combs, take out the bees, and transfer them to a hive.—W. Z. HUTCHINSON.

Possibly they might be smoked out if smoke could be blown into one hole, leaving another for the bees to come out.—C. C. MILLER.

If they are within easy reach you can drive them out, or smoke them out. Otherwise we would advise you to leave them alone.—DADANT & SON.

Oh, yes, in many ways, but they are not worth the trouble and expense. You can buy bees cheaper.—JAMES HEDDON.

By making a hole at the top of the brood-nest and another at the bottom, you can smoke them out if the day is warm. Put the nozzle of the smoker in the lower hole.—J. P. H. BROWN.

They might be driven up and out by smoking them, but I doubt if it would be a paying job. Try and see what you can do, and report.—J. E. POND, JR.

Yes. Such colonies will generally cluster about the portion of the tree from which their honey is taken, when they can be hived.—G. M. DOOLITTLE.

If you can cut a hole in the tree at the brood-nest you can take out the bees and honey, but if you are not allowed to cut into the tree, you had better let the bees alone.—H. D. CUTTING.

The only way would be to climb the tree and cut out the bees. But I should think a *whole neck* would be worth more to you than the bees. In other words, the bees would not be worth the adventure.—G. W. DEMAREE.

I have known men to climb trees and by means of ropes and an ax get out the bees and hive them; but they labored hard enough to earn 2 or 3 colonies in frame hives, besides running a great risk of their lives. There is surely a better way for S. B. L. to get bees.—G. L. TINKER.

Colonies with Mixed Bees.

Query, No. 349.—I received 2 Italian queens and introduced them into two hives on Aug. 4, and I now find Italian bees in two other hives besides the two that I gave the queens. How do you account for that?—J. G. C.

Perhaps they are stragglers.—W. Z. HUTCHINSON.

Bees often get mixed up by getting into the wrong hive.—H. D. CUTTING.

Bees frequently go into other hives than their own. This is no new thing.—A. J. COOK.

Bees frequently get into wrong hives, particularly when returning from the fields late in the evening.—J. P. H. BROWN.

Young bees often get into the wrong hive. That explains your case.—DADANT & SON.

It doubtless occurred by the young bees from the Italian colonies entering the wrong hive.—G. M. DOOLITTLE.

One way in which it might occur, is that young queens were reared which met Italian drones at some distance, and then part of the young bees would look like pure Italians.—C. C. MILLER.

Where the hives stand close together it is not uncommon for the young bees of one hive to enter another, and so become mixed. Otherwise the two other hives have hybrid queens, if all were black bees at the beginning.—G. L. TINKER.

You do not explain matters sufficiently to more than make an answer a mere guess. If you mean that you can detect a few Italian bees in two other hives near by the Italianized colonies, it would be plain to me that they got there by mistake. Young bees enter the wrong hives when they have been on the wing, much more frequently than most people are aware of.—G. W. DEMAREE.

There is nothing strange at all in this state of things. Bees are constantly interchanging to a greater or less extent, so much so that if I had one-half black and one-half yellow bees originally, I should expect in two or three months to find each hive containing some of both the yellow and the black ones.—J. E. POND, JR.

They came from your Italian colonies, and by mistake returned to the colonies where you now see them, and where they were kindly received (being so young and innocent), and where they will remain.—JAMES HEDDON.

◆

Do you Want a Farm Account Book? We have a few left, and make you a *very tempting offer.* It contains 166 pages, is printed on writing paper, ruled and bound, and the price is $3. We will club it and the Weekly BEE JOURNAL for a year and give you both for $2. If you want it sent by mail, add 20 cents for postage.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; O+ east; +O west; and this ♂ northeast; ⌐O northwest; O⌐ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Michigan State Convention.

The Michigan State Bee-Keepers' Association held its 20th annual convention on Dec. 1 and 2, 1886, at Ypsilanti, Mich. The meeting was called to order at 11 a.m. on Dec. 1, with President A. J. Cook in the chair. As the minutes of the last meeting had been widely published, their reading was dispensed with.

The first topic discussed was,

RESTORING FLAVOR OF STALE HONEY.

T. F. Bingham—At the Indianapolis convention this subject was discussed, and some asserted that when honey had been exposed to the air and lost its flavor, it could be brought back to its former excellent state by the application of heat. In proof of this assertion reference was made to the fact that when canned or preserved fruit began to show signs of fermentation or of "spoiling," the good house-wife "heated up" the fruit and then pronounced it "good." I went home to a very nice house-wife and asked for her opinion, and received a very lively answer. It was: "P-o-o-s-h! It is nothing of the kind; such boiling only causes the stale part of the fruit to permeate the whole mass. The only thing to be done is to throw it away." Honey is a luxury or it is nothing. It cannot compete with cane-sugar as a sweetener. It is the fine flavor and aroma that give honey and maple sugar their value. Honey that is extracted when "green" and ripened by exposure to the air, or honey that has been long exposed to the air, never has the fine flavor of that ripened by the bees, and kept sealed up.

A. I. Root—We once had some maple sugar that had been exposed to the air, and was not quite so nice in consequence. It was "heated up," and although not *quite* so nice it was greatly improved.

A lady said that when we find fruit slightly spoiled through some imperfection of the can, we skim off the top and seal the rest, when it becomes quite palatable.

A. I. Root—Dr. Miller says that honey that has candied and then been allowed to drain, is very fine when melted.

T. F. Bingham—If the thin honey is skimmed from the top the rest will be greatly improved. The thin honey may be made into vinegar.

HONEY FROM CAPPINGS.

R. L. Taylor—We prefer the honey that drains from the cappings. The reason may be that it is in such small quantities that it becomes more thoroughly evaporated.

T. F. Bingham—Is it the consistency or the aroma, Mr. Taylor, that makes it so interesting in your family?

R. L. Taylor—Both. The flavor is not, perhaps, a natural one, but rather one acquired from a contact with the cappings. It is a pure wax flavor, but one we prefer.

Geo. E. Hilton—There is another point. Honey from cappings is *always* thoroughly ripened; while in a large crop part of it may have been unsealed.

A. I. Root—I agree. I once extracted honey late in order to feed sugar, and the honey thus secured was equal to that drained from cappings.

R. L. Taylor—Without raising the point as to whether honey can be ripened artificially so as to equal that ripened by the bees, I will say that honey ripened and sealed by the bees is superior to that extracted before being sealed.

The discussion here drifted into the subject of

RIPENING HONEY.

A. J. Cook—I believe that honey can be ripened artificially so that it will equal that ripened by the bees. I have placed both kinds before good judges, and they were unable to decide. My brother has a granary that is very warm, and he extracts his honey when thin, puts in some shallow sap-pans that have been discarded, and places them in the granary, covering them with muslin to exclude dust and insects. Mr. Rey, of East Saginaw, got some of the honey, and I should like to have him say how it compares with other honey he buys.

John Rey—It is always thick, and of good flavor and color, and is as nice as any honey I get. There is never any scum rises upon it, such as there is on unripe honey.

T. F. Bingham—There, Professor, I think I have the inside track yet, even by one of your own witnesses. Mr. Rey says there is a scum rises upon unripe honey. This scum is the result of fermentation. How can fermentation take place without injuring the honey?

Prof. Cook—I am not in favor of unripe honey. It must be thoroughly ripened. The flavor in honey is given by the flower from which it is gathered, and all that is needed is evaporation, and this is caused by heat, and why there should be any material difference whether this is applied in the hive or outside of it, I am unable to discern. Honey must be ripened, but extract it when you please.

T. F. Bingham—Would you leave your maple syrup exposed to the air, Professor?

Prof. Cook—No. I would evaporate it just as soon as possible, and then seal it up.

R. L. Taylor—Even if honey *can* be ripened artificially so that it will be equally as good as that ripened by the bees, shall we advise such a course? One bee-keeper in a hundred might do it properly, but what of the other ninety-nine?

Prof. Cook—Then we must educate them, and if they will not be educated then they must suffer the consequences.

Mr. Macpherson—We should consider the cost; perhaps honey can be ripened artificially enough more cheaply so that it will be the better way even though the honey is not quite so good.

T. F. Bingham—Because I have money to-day is no sure sign that I will have any to-morrow. We must look to the future. Where will our market be in ten years unless we furnish only a first-class article? What kind of a market will our children have if we continue to put upon it the poor "stuff" that is honey only in name? Honey is a luxury, and will always remain as such even if sold for one-half the price of cane-sugar. What is it that makes honey and maple sugar luxuries? Is it their fine flavor, their rich aroma, their delicate "bouquet," if you please? Allow these to escape, and what is there left? A very poor quality of sweet of a low power. Honey sealed over and kept at a high, even temperature and covered by bees, improves by age and becomes smooth, rich and oily, the same as bottled wine improves by age. If we expect to hold our market for extracted honey, we must not extract it until it is fully ripened, and it must be kept sealed up from the air. Ten years from now will show that I am correct.

The convention then adjourned until 1:30 p.m.

AFTERNOON SESSION.

The convention was called to order at 1:30 p.m., by Prof. Cook, who then delivered the

PRESIDENT'S ANNUAL ADDRESS.

In casting about for a subject most appropriate for this annual address of the President of our Association, it has occurred to me that a *resume* of the year's progress, and a statement as to the present outlook for our apicultural pursuit, might be both interesting and profitable, even if not the most profitable theme that could engage our attention.

Let me state as a preface, that it might seem a bold undertaking to give any formal address at all, in the face of the criticisms that have recently deluged us regarding all such exercises in our apiarian conventions. It would be bold except as I promise at the outset that my address shall be brief. Let me suggest, however, in this connection, that very likely these criticisms may justly be criticised. It would seem that a sharp, terse, concise presentation of any subject by one well fitted to discuss it wisely, would be a most fitting way to introduce any subject before such an association as this. A written essay, properly prepared, is methodical. well digested, thorough, none of which adjectives will apply to many of the crude addresses which one hears at most of our meetings. Indeed, a short, incise essay serves as a director, and aids to keep debate in line so that we can all gather the best fruits from the discussions. Surely, then, the only valid argument that can be offered against essays is that they may be long, illy arranged, and not well considered before presentation; and so detract from the interest of our meetings.

I do not believe such statements as the above can justly be made of the essays presented before our Association in the past. Should our experience meet with a change, let us not rashly put aside what the usage of all such bodies in the past has proved to be the most valuable auxiliaries in their discussions and deliberations, but the rather appoint a competent committee to decide upon the merit of all essays presented, whose duty it shall be to carefully examine all such essays, and decide as to their merit, and whether they shall be presented before us for our instruction and consideration. Does any one think that our Association would have been so influential and helpful in the past, if we had dispensed with the many interesting and valuable essays that delighted us in all the years of our existence? Such an elimination would have left us Hamlet with the Prince of Denmark omitted. What we desire at these meetings, to attend which costs us no little time and money, is to get the best thought, methods. practice of the wisest of our craft. How few of us have that thorough discipline which enables us to give the best that we have in extempore addresses. Thus, I say, let us continue our essays and prepared addresses, lest we take a step backward, and thus show ourselves unworthy the age and the time.

The past year has been one remarkable in bee-literature. The first volume of Mr. Frank Cheshire's great work truly marks an epoch in the literature of apiculture. It is a masterly work, and shows a wealth of study and research which will make it one of the classics among our scientific treatises. Every live bee-keeper should make it a study, for study he must would he gather all it has to offer.

Quite as startling and phenomenal is the work of our own brother apiarist, James Heddon. His work, “Success in Bee-Culture,” however, is quite the opposite of that of Mr. Cheshire. It is wholly, from first to last, practical. Rarely does any work bring such a profusion of rich, practical hints as does this. On every page is some suggestion which commends itself to the wise apiarist. More than this, each word of advice comes with the certificate of “tried and succeeded.” What wonder then that we have tried and adopted nearly every plan or practice therein recommended? I would say to any bee-keeper who has not read “Success in Bee-Culture,” to secure a copy at once,and study it thoroughly the coming winter. Nothing will tend more to win success.

Another work, “A Year Among the Bees,” may be described as fresh, terse, clear, full of genial kindness, and replete with practical suggestions. This work details the operations in the bee-yard just as they occur through the year, and so is unique among the books of our art. Here, too, we of Michigan feel proud that it is a Michigan man that has given us so excellent a work. I know that Dr. C. C. Miller lives in Illinois, but to say that such a man belongs to any one State is to say that we do not know him at all. We all claim Dr. Miller as our man.

An event of no small importance to bee-keepers, was the sending of a Commission by Ontario or Canada to represent the Dominion in London, at the Colonial Exhibition. Such an exhibit, and the wide distribution of American honey.—for though this Commission has talked Canada! Canada!! still they are a part of America—will do much to build up a foreign demand and market not only for Canada, but for the United States as well. We owe Mr. D. A. Jones and the whole party a vote of thanks.

We also have a racy little work from England: “Simmins' Non-Swarming System.” If unfinished combs next to the entrance of a hive are a sure security against swarming, it is surely an interesting fact which can be turned to good use. Mr. Simmins' idea of crowding bees into the sections, reminds me of much that has been said by two of our own distinguished bee-keepers—Messrs. Heddon and Hutchinson. Simmins' method of direct introduction of queens is not new in America. This work I am sure will interest and benefit the American bee-keepers who may read it.

Very few inventions have caused more remarks of late than Mr. Heddon's new hive. Of late prices are so low—though prices run no lower in apiculture than in agriculture and other kindred pursuits — that any scheme, method, or invention that will lessen labor will surely attract attention and win patrons. This is what the New Heddon hive and system promised to do; and many of us who have put it to the practical test have found that it did not promise in vain. We are proud that it is one of our own bee-keepers that has conferred this boon upon the bee-keeping public. There is no doubt but that the reversing system has come to stay. Many even now have adopted it never to return to the former methods.

Another invention—the solar wax-extractor—has grown rapidly into public favor the past year. It is a decided improvement, even upon the Swiss extractor. It is convenient, safe, inexpensive, and is *sure* to give the very nicest wax, and that with no trouble or expense.

There are four very important questions which should receive our most careful consideration at this time. They are as follows:

First, the price of honey, and how can it be marketed? I said to one of our large honey-producers a few days ago—one who before last year always secured 15 cents per pound for all his extracted honey, and sold last year for 8 cents, and this year for 7—are you not discouraged at these prices? “No, indeed,” says he, “it pays as well as any other farm product.” Even if this is so, we may well take counsel from our wisest producers, and consider whether there are any measures practicable which may be adopted to stay the rapid decline in prices, and so stimulate the markets that they may come seeking our products. I hope that we may thoroughly discuss this subject of “honey market,” that each may go home more hopeful, more able to solve the pending difficulty.

Second, how can we produce the finest comb honey the most cheaply? While extracted honey goes begging in some of our markets, comb honey finds a ready sale at remunerative rates. It is, then, a matter of great moment to learn how to get the most of this beautiful comb honey in the easiest way. It seems to me with the Heddon hive we have reached the paradise of the comb honey producer. Surely this is a matter that we may well discuss in the hope of gaining still greater light.

Third, the question of honey-plants is one that we may do well to discuss. How often we find our harvest cut off just at its dawn. The flowers, white clover or basswood forsooth, seem to be pouring out the nectar in profusion when, presto, all is changed, the bees hang idly about the hive, storing ceases, and the apiarist's profits are reduced to the minimum. Now, is it not possible to secure plants that will ensure a continuous flow despite rain or drouth? I am sure I have seen just such results twice, once through raspberry, and again through Alsike clover bloom. In both cases white clover was abundant, but, for some subtile influence known only to Nature's Great Chemist, refused her sweets, while these other plants yielded abundantly.

It seems to me that here is a most fruitful field for experimentation. Happy the man who discovers and makes known how, by judicious planting, we may ensure a fine honey product each season!

Fourth: The last subject I wish to suggest is that of improved breeds of bees. We all know that the common black bee has its merits. The same is true of each of the other races—Carniolan, Syrian, Cyprian and Italian. To say that these races cannot be so combined as to produce a bee that shall combine all the merits of all our present races, with the demerits eliminated. is to show a total ignorance of all the laws of breeding. The same skill and care that gave us our noble short-horns and Herefords, will give us the ideal bee. To secure this result we must look after both the drones and queens, and must be quick to note changes for the better or worse, that we may lay hold of the one and stamp out the other. I well know that they are great obstacles in the way of success, but that they are insurmountable I do not believe; and here, as everywhere, success is guaged by the effort it costs.

But I promised to be brief; and though there is much else that I would like to discuss, I forbear, and leave these and other matters for your consideration.

Following the President's address was the following essay by Mr. T. F. Bingham, entitled,

WHO SHALL KEEP BEES ?

Just as if, in this free country, any one should not keep bees if he wishes to! But it is not in this sense that the question was designed to be discussed; but who could, to the best advantage, keep bees? No one could question the right of him who pleases to keep bees, so to do; subject, of course, to the rights of others just as in the case of poultry or other stock. No one can presume to injure the peace and health of any community in the pursuit of his own private interests, no matter what they might be.

With the thousands of domestic fowls in this country, and the almost limitless number of eggs produced by them, the United States imports from France, and other densely populated countries, millions of dozens of eggs annually, yet the question as to who shall keep hens does not occur as a question of right—it is simply a question of pleasure or inclination; and whoever wishes may try to make a success and an income in the keeping of fowls and in the production of eggs. In this generation (and I shall not pretend to say that it is in any sense better or worse than those which have preceded it) the question of who should do this or that, or embark in this or that pursuit, hinges entirely upon circumstances, the first of which is the wish to do something. Bees to do well must have a good and convenient pasture. Bees to be easily cared for must occupy a convenient hive. Bees to be judicially managed must be managed by an interested bee-keeper, who will use ordinary studiousness to become a thorough bee-master. In bee-keeping there are no mysteries, more than in raising fowls or potatoes. The same reasonable methods which would lead to success in one would result in success in the others. Bee-keepers, like others, are so covetous of the honors of their pursuit that they do not long keep their "light under a bushel;" hence, there are no valuable secrets. Bee-culture is an open book; he who will may read.

In reviewing the rise and fall in prices of various commodities, honey does not prove to be an exception to general rules. Whether the present price is the result of overproduction or of a general decline in values of other commodities, no real evidence exists. One fact, however, is present, namely, that the producing of honey at present on a small scale pays the producer of a few hundred pounds a much better dividend than would the raising of a like value of pigs and fowls. At present all farm crops, as also all manufactured goods, represent little more than the labor and material expenses required to produce them; yet, at this stage, when wheat rules at a point said by the farmers of Michigan to be below the cost of production, the farmers of Michigan have planted more wheat this fall than in any previous season within the last five years. The only fact to be adduced from this is the simple one that the farmers have more labor than money, and are willing, therefore, to give more of their labor for the money that wheat will bring than in previous years.

Bee-keepers may also, in common with others, find it advisable to produce more honey even at a less price than previously. Ample and convenient pastures and comparative isolation point to the farm as the home of the honey-bee, and to the farmer as the future successful bee-keeper. When the farmers finally realize—as realize they surely will—the value of an apiary in connection with their pigs and poultry and cows, the greatest production of honey, the best location for the apiary, and the most successful bee-keepers will have been found.

President Cook—We ought to have Mr. Heddon here to take issue with Mr. Bingham about farmers keeping bees. Perhaps Mr. Hutchinson will answer for him.

W. Z. Hutchinson—Actions speak louder than words; *I* expect to drop farming entirely for bee-keeping.

R. L. Taylor—I think that some men might succeed in raising potatoes that would never succeed in producing honey.

Dr. Higbie—Only the man who makes a specialty of one thing can hope for the highest success.

The next topic discussed was that of

HANDLING BEES.

Prof. Cook—There are a few principles that should be understood. In simply walking among the hives, unless the bees are disturbed, there is little danger of stings. Quick motions sometimes incite the bees to an attack. Frightening bees takes away their disposition to sting. We have been told repeatedly that smoke causes bees to fill themselves with honey and then they are good natured. This may be true, but it is also true that simply fright will have the same effect. We raise the cover to a hive and puff in some smoke, then take off the cover and lay it upon the ground. The bees upon the cover are peaceable. They have had no opportunity to fill up.

T. F. Bingham—A wire-cloth hat arouses the ire of bees. They fly against it and think somebody has hit them. Confidence on the part of the operator is one of the greatest things in preventing stings. A horse obeys a man who is his master, but let a nervous woman try to manage him, then look out! Bees may sting a passer-by when they are first taken from the cellar, but they soon become accustomed to the presence of the bee-keeper. When a swarm is hanging upon a limb, smoking the bees will cause them to cluster compactly, the same as sprinkling them with water. It will also take away their disposition to sting. If the apiary is surrounded with trees set thickly in rows, the bees will pass over the trees in their flight and not molest any one near the trees; by taking this precaution bees may be kept near a highway with but little danger of stings to those passing by. I prefer Lombard poplars, as they are tall, of quick growth, and the bees do not alight upon them.

A. I. Root—I wish to particularly emphasize the importance of not allowing the bees to gain access to honey outside the hives during a time of scarcity; as it will surely lead to stinging.

Prof. Cook—Those who have to handle bees when robbers are troublesome, will find great relief in using a bee-tent.

VARIETIES OF BEES.

A. D. D. Wood—I have tried the Syrians, but they are too fierce. Smoke does no good. I had to use chloroform. They fill the cells so full, and cap the honey so thinly that it gives the honey a dark appearance. I have discarded them for Italians.

W. Z. Hutchinson—I have tried the Carniolans in a small way, but I do not find them superior to the blacks; in fact, if obliged to choose a pure variety I should choose the blacks.

Dr. Ashley—I had one colony of Carniolans, and it swarmed only once. They are gentle, but can be roused, and when roused they *are roused.* Their combs are more yellow or cream-colored than that made by other bees.

R. L. Taylor—Italians always sting more while being hived than at any other time. I would not depend so much upon color in distinguishing varieties of bees as upon other characteristics. Italians remain very quietly upon the combs, are difficult to shake off, and do not "rush things" so early in the spring as do some other varieties.

A. D. D. Wood—I had several varieties of bees in the cellar one winter. When taken out in the spring the Italians had scarcely any brood; next came the blacks, while the "Eastern bees" had large quantities. I have had bees that were very beautiful and very gentle, but almost worthless as honey-gatherers.

Prof. Cook—I have seen such bees. You can almost knock the hive over, and they will forgive right on the spot; but are of no use as honey-gatherers. No one variety has all the good qualities. We must try and unite the different varieties, and then eliminate the bad qualities. I think we owe Mr. Heddon a vote of thanks for the hint he has given us in this direction.

A. I. Root—In the spring my Carniolans were the most promising colony. They began breeding first, and became the strongest colony, but furnished no surplus honey.

BEES FOR BUSINESS.

Mr. Fellows—Which would be the better way, if one wished to Italianize his apiary, to rear queens or buy them?

Prof. Cook—I was talking this matter over with Mr. Poppleton a few years ago, and his decision was that so long as we had so good queen-breeders it was better to buy queens.

A. I. Root—It is a question with me whether it is advisable to Italianize, or Syrianize or Carniolanize an apiary. I have been thinking for some time that it would not be profitable for a honey-producer to breed for a pure race. Many desire hybrids, and are satisfied with nothing else.

R. L. Taylor—I am very much pleased to hear Mr. Root speak as he does. The time has come when we must breed "bees for business," regardless of race, color, or markings.

Prof. Cook—No race has all the best qualities. We must select the best, cross them, and then weed out the undesirable qualities.

T. F. Bingham—When I stated at the Cleveland convention in 1872, that the black bee had some superior qualities, it raised a perfect "sizzle." But time tries all things, and merit will eventually win, and at last the merit of the black bee is recognized.

COMB FOUNDATION.

A. I. Root—I should like to know whether any one present has had any experience in using two pieces of foundation in each section?

Mr. Macpherson—Mr. Corneil has used them. The pieces are triangular in shape.

John Rey—I use one piece, but fasten it at both top and bottom.

A. D. D. Wood—I have tried this. It is a failure with two-pound sections; as the foundation sags too much. Separators must be used with one-pound sections, or there will be trouble. The foundation must be warm when it is put in, then it will not stretch so much.

Mr. Matthews—How shall we avoid having imperfect sections?

R. L. Taylor—Do not put on the sections until honey is coming in rapidly, and crowd the bees. This course is not advisable, however, as it is better to have some imperfect sections than to curtail the quantity of honey.

Prof. Cook—How far is it advisable to use foundation?

R. L. Taylor—I think it is profitable to use it in sections, also in the brood-nest, unless it is at the time of hiving swarms. I think newly-hived swarms had better build their own combs in the brood-apartment, unless it may be that it is so late in the season that the bees would not fill the brood-nest without help.

Mr. Fellows—I tried taking away a few combs when the fall honey-flow commenced, and put empty frames in their places, but the bees built drone-comb and filled it with honey.

R. L. Taylor—That was not following the Hutchinson plan. Mr. H. insists upon a small brood-nest, and that the empty frames be used only when hiving swarms. You gave empty frames in the fall to an established colony; at this time the bees are reducing the size of their brood-nest, and if any comb is built it is filled with honey, consequently drone-comb is built.

A. I. Root—Will the use of drone foundation in the sections prevent the building of drone-comb below? If so, is there any objection to its use?

Mr. Fellows—I have used it in the sections, and the honey was fine, but it was black bees that did the work.

W. Z. Hutchinson—The hiving of one or two swarms upon empty frames does but little towards settling the question. A large number of swarms should be hived; hiving them alternately upon empty frames and upon foundation; weighing everything carefully, and continuing this year after year. This I have done, and I know that it does not pay me, with my management, to use foundation in the brood-apartment when hiving swarms.

Prof. Cook—I have tried Mr. Hutchinson's plan in a small way, and I must say that I am delighted with it.

W. Z. Hutchinson—What is the best way to avoid the trouble arising from the drone-comb built as the result of having old queens?

R. L. Taylor—Allow the comb to remain until another spring, then remove and extract the honey, melt up the comb, and put a sheet of foundation in its place.

W. Z Hutchinson—That is the best I can do; but it is an expensive method. It can be avoided by superseding queens, but I should look upon the remedy as worse than the trouble.

R. L. Taylor—Queens do the best work the first two seasons, and if they are to be superseded, I suppose it is best to do it during the swarming time.

Geo. E. Hilton—I have taken away the old queen at swarming time, and allowed a young queen to run in the hive in her place.

The convention adjourned until 7:30 p.m.

EVENING SESSION.

President Cook called the meeting to order at at 8 p.m., and Mr. R. L. Taylor read the following essay, entitled,

WHAT I KNOW OF FOUL BROOD.

Some one has said that foul brood is a subject of discussion in every bee keepers' convention, and perhaps it would not be well that this convention should be an exception. I chose this subject, too, because I am greatly interested in it myself just now, and with the hope, first, that I may get from others some information that will be of assistance to me; and, secondly, that I may be able to give some hints that will be of value to others—not, indeed, to those who already have experience with the disease, but to those who, not having had any particular knowledge of it, shall, in the near future, receive a visit from this insidious enemy. There are, undoubtedly, some such here. This so-called foul brood made its appearance among my bees, so far as I know, during the present season. I first discovered its foot-prints by here and there a dead larva in 2 colonies last May, but from obtuseness or incredulousness, or from the imperfections of published descriptions of it, or from a different type of the disease, I did not recognize it.

Mr. Muth says: "Foul brood can be rooted out completely and without an extra amount of trouble, provided you are sufficiently impressed with its dangerous and insidious character, and are prepared to meet it promptly on its first appearance." But to be that, one must know it at first sight.

What are the characteristics by which it may be certainly recognized? We are told that the dead larvæ are brown or coffee-colored, but brown is of several different shades; and what is coffee-colored? Is it that of the raw coffee bean, or of the parched bean, or of the pure decoction with milk in it? At the best, I think these descriptions are too indefinite. I should describe the color of the dead larvæ as being, at first, just like that of coffee, as you find it on your breakfast table, with a moderate quantity of milk in it ready for consumption. The larvæ gradually become darker until they are almost as black as tar, and about of the consistency of a piece of dry, dark brood-comb. At this stage they lie somewhat spread out upon the lower side of the cells, are drawn back a little from the mouth of the cells, and have the appearance, at first glance, of being turned up a little, somewhat like the toe of a boot. At this stage, in a good colony, with dark combs for breeding, as seen in the autumn, an inexperienced person would scarcely discover the dead larvæ at all.

Secondly: The consistency of the dead larvæ is homogeneous, there being no watery matter that may be drawn off, leaving more solid parts, at first, and for a considerable time the substance of the larvæ is ropy, tenacious, and elastic, so that if one end of a splinter is inserted in the matter and withdrawn, the matter will draw out in a thread like thick honey, but it is so much more elastic than honey that when the thread breaks, which it will do when drawn to the length of half an inch, there is no danger of any of it dropping, but the one part will spring back into the cell, and the other part to the splinter. You will, of course, understand that the dead larvæ retain their shape more or less perfectly for a considerable length of time on account of their outer membrane remaining apparently intact.

Thirdly: Much has been said about the disagreeable character of the odor arising from a colony affected with the disease; it is true that it is sufficiently so, but not to a greater extent than many other odors. It is much like that of a poor quality of glue in a warming-pot in preparation for use. The disease would ordinarily run several weeks in a colony before one would be likely to discover it from the odor on opening the hive. Though I have had 2 colonies so diseased as to be reduced to the strength of weak nuclei, yet no odor could be discovered without opening the hive or putting the nose close to the entrance; so I do not depend upon the sense of smelling in discovering the disease.

Fourthly: Generally more or less of the cells containing dead brood have cappings, each of which has an opening near its centre, and these openings vary in size from one that might have been made with a common pin up to one-half as large as the capping itself, or even larger; as if the bees, discovering the death of the larvæ while capping the cells, at once interrupt their useless work. Sometimes many dead larvæ will be found in the cells on which the work of capping has not even been begun, and, on the other hand, sometimes a combful of dead larvæ will hardly exhibit a cell with an incomplete capping. Cells containing dead brood and having cappings which are entire, may generally be detected by the sunken appearance of the cappings.

As I have said, last May I discovered the effects of the disease in 2 colonies. I could not believe that it was the work of foul brood, but determined to keep watch, and did so until I saw them increase in strength rapidly, one of them casting a swarm, and, the busy season coming on, I paid no more attention to them until early in July, when the white clover season closed. I had 3,000 sections partly filled with honey, and in order to have them finished, I selected 27 colonies to do the work, and got honey to feed them for this purpose, by extracting two or three of the heaviest combs from each colony in my apiary. Everthing progressed finely for several days, until one of my employes called my attention to a colony that seemed not prosperous. On examination I decided the case to be foul brood, and found that several other colonies had the disease also, and that from 10 to 20 combs from diseased colonies had been extracted, the combs distributed through the apiary, and the honey fed to the 27 colonies before mentioned.

As the readiest method I proceeded to attempt a cure by the starvation plan, and treated 50 colonies or more very successfully so far as yet appears. I do not by any means cherish the hope that there will be no more cases. I shall undoubtedly have to continue the struggle awhile yet, but I have no doubt of final success.

In closing, let me remark as follows: 1. That the rapidity with which the disease will destroy a colony depends as much upon the number of combs in the hive as upon the virulence of the disease. A colony on 8 combs, attacked by the disease in the spring, will very likely be reduced at the close of the season to a pint or quart of bees; while one on 20 combs will perhaps cast a swarm, and still come through a good colony. 2. Honey from infected colonies certainly carries the disease. Of the 27 colonies fed as above, 26 had the disease well developed when I stopped breeding. 3. I venture the opinion that the disease is conveyed only incidentally, except by infected honey, and by the matter of diseased brood. I did what I would not advise any one to do, and that was to put a diseased colony back into its own hive without disinfecting the hive, of course giving the bees, after a course of fasting, sound honey, and the disease did not reappear though a considerable amount of brood was reared.

Finally, hiving swarms from diseased colonies on foundation or empty frames seems to be all that is necessary to free them entirely from the disease.

Dr. A. B. Mason—I have cured foul brood by the starvation plan, and by using salicylic acid. I prefer the former plan.

P. M. Puhl—It can be cured, there is no doubt about that, but the trouble is to keep it cured; especially is this the case where there is much timber.

T. F. Bingham—I would not try to save the brood, as young bees getting into the wrong hive will spread the disease.

Dr. Mason—I should save the brood.

Mr. Smith—Bee-keepers should be careful about keeping combs containing foul brood, as when it dries, the spores are liable to float in the air, and be scattered to colonies of bees.

Prof. Cook—I think this would be possible.

Next came the following essay by Geo. E. Hilton, on the

HONEY-FLORA OF NORTHERN MICH.

If one takes the time to observe and the trouble to enumerate them, he will be astonished at the almost endless variety of honey-producing plants within this State. It would require a skilled botanist to name them all. The All-wise Father has provided nearly all trees and plants with either honey or pollen to attract the insect world. He spreads a continual feast for the bee that the important object of perfect fertilization may be more certainly attained. The bee that slips from flower to flower, rollicking in the golden dust among the new-born anthers, playing hide-and-seek in the opening corollas, is performing a work of untold value in the wise economy of nature. The honey secreted by the blossoms is for the purpose of inviting cross-fertilization, and to prevent in-and-in breeding.

If no insect is there to utilize the drop of nectar, it is evaporated and scattered to the four winds of heaven. No one is richer for the ungathered sweets, and no one is the poorer whose fields are searched by the tireless little worker whose instincts lead it to garner the evanescent riches which of a truth take to themselves wings and fly away. From the "trailing arbutus" that peeps out of the snow on some hillside, to the last frost flower in autumn, there is almost a continual succession of honey-producing plants, whose wealth of nectar ought to be utilized as one of the sure resources of this grand State. California may occasionally astonish us by her magnificent honey crop, but in Michigan where "the early and latter rains" are not only promised but sent, we are always confident of a reasonable surplus.

The pastures and roadsides are dotted with white clover which yields the finest honey in the world. The rivers and lakes are generally skirted with linden timber, and our uplands are interspersed with the same—one of the best honey-producing trees of the world, yielding largely a nectar that is prized for its beautiful amber color and aromatic flavor. Every fence-corner and neglected field is planted by the hand of Nature, as though she were trying in some way to counteract man's shiftlessness by making the earth bring forth abundantly some of the good things of life.

It is of the greatest importance to the bee-keeper to know just when this succession of bloom occurs, that he may have his bees in the best possible condition to secure the nectar. So far as my observation and knowledge extend, I will briefly enumerate them: About the first pollen comes from willow and soft maple, usually about the middle of April, varying with the season. In the early part of May comes the hard or sugar maple, and this tree deserves more than a passing notice. It produces both honey and pollen in large quantities, and I sometimes feel that were our bees in the same condition they are at the approach of the linden flow, we would receive nearly the same results.

Fortunately my bees last spring were strong early, and many of them stored considerable surplus from this source, and it being followed closely by the raspberry and blackberry bloom (with which this country abounds), I secured at least a thousand pounds of surplus previous to the opening of white clover, from my 60 colonies. White clover opens from June 1 to June 15, and in my 10 years of bee-keeping it has never failed to give a fair surplus. The flow was short the past season, on account of the drouth, but my bees being strong I took about 2,500 pounds from this source. There is no interval between clover and linden in this latitude; in wet seasons the clover often continues until after the linden ceases to bloom. The linden opens from July 4 to July 20, according to the season, but cannot be depended upon in this latitude. It is the most sensitive and more dependent on atmospheric conditions than any bloom in this latitude. We usually get two or three days, however, and once I remember of ten days when it secreted honey during its bloom. I find it does better along rivers and lake shores than on the uplands.

After the above flowers we have an interval in the honey-flow until buckwheat, fireweed, goldenrod, asters and boneset come into bloom, with which, aside from buckwheat, this country naturally abounds. They usually afford us some surplus, but the greater part goes to the brood-nest for winter stores; in fact I have never had to resort to feeding sugar for winter stores, and I hope I never shall.

There are many more annuals and shrubs that go to make up the honey-flora of northern Michigan, and we have some disadvantages that our Southern bee-keepers do not have; but taking all in all, I think the northern half of the State is much better adapted to the pursuit of bee-keeping, and that the honey is of better quality than in the southern half.

Dr. Ashley—I had 300 pounds of honey that was bitter. It has been pronounced boneset. I should be pleased to know what it is.

Dr. Mason—I have had honey from boneset, and it is bitter.

W. Z. Hutchinson—So have I.

Prof. Cook—The secretion from the bark-louse is gathered in some dry seasons, and this is bitter.

R. L. Taylor—I am surprised to hear Mr. Hilton speak of basswood honey as amber colored.

Prof. Cook—I have had samples of basswood honey that were amber colored.

T. F. Bingham—Oh, Professor, that probably came from standing in those discarded sap-pans in the granary. (Laughter.) Basswood honey usually has a greenish tinge.

Dr. Mason—When bees are gathering honey from one kind of plant they may also be gathering a little from something else, which will slightly change the flavor or color.

The convention then adjourned until 8:30 a.m. of the next day.

Concluded next week.

For the American Bee Journal.

Opinions on Legislation for Bee-Keepers.

W. H. OSBORNE.

On page 742, Dr. Miller asks for the views of bee-keepers, and especially for the opinions of those belonging to the legal fraternity, on the subject of "legislation for bee-keepers." The Doctor seems to raise two questions—"the *desirability* and the *feasibility* of such legislation as will give a bee-keeper an exclusive right to keep bees in a certain territory."

The question of "desirability" is one that I think it would be difficult for us to decide with unbiased judgment. There are persons in this village who have kept bees longer than I have, and if by reason of priority I must surrender the business to them, such legislation might appear more desirable to them than to me. In other words, our own opinions as to the desirability of such legislation would naturally depend upon whether it would or would not inure to our benefit.

The question of "feasibility" perhaps we can discuss with less prejudice, and although my views may not entirely coincide with those of the Doctor, still I do not advance them for the purpose of entering into a controversy, but that we may consider the subject in its various phases. There is no doubt that much good might result to the specialist from such legislation as would give them absolute control over certain territory; but in what way could this be accomplished? I can see no way except it be by license, and I do not think that in this State the Supreme Court would hold a license law constitutional that had for its object the restriction of such a lawful industry as bee-keeping. Liquor-selling is the only business (?) which is restrained in that manner, and that is only done under the guise of a tax, which it is claimed gives no right to sell, and certainly we do not want to bring our noble pursuit down to a level with that nefarious traffic.

But if such legislation could be obtained, would not the effect be to foster monopolies? The specialist could keep his hundreds of colonies, and supply the market, while the poor man would be deprived of keeping his 2 or 3 colonies to produce enough honey for his own family use.

There is competition in all kinds of business, and by reason of such competition two will sometimes fail where one would succeed; but we never think of asking legislatures to decide which of the two shall yield the entire business to the other. Another difficulty I see is this: We do not pasture our bees entirely on our own land, and why should the legislature say that Mr. Smith may pasture his bees on the land of Mr. Jones, to the exclusion of Mr. Brown, or even of Mr. Jones himself? While I say nothing about the desirability of such legislation, I must say that as I view the matter, it does not seem feasible. I am a firm believer in the theory of the "survival of the fittest," and I believe that the bee-keeper who reads the bee-papers and keeps up with the progress of the times, can defy competition from those who are trying to carry on the business as their fathers and their grandfathers did before them.

Chardon, O.

For the American Bee Journal.

The Cappings over Honey.

C. P. DADANT.

On page 762 Mr. Hutchinson asks me to give my proofs for saying that honey-cappings are impervious; and I hasten to respond, as it is always a pleasure for me to discuss a subject with him.

We have in our extracting room—a cold room in winter and rather warm in summer—a few cases of honey in sections that have been there ever since the fall of 1884. This comb honey has been "sweating" like honey often does, and the bottom of the cases is covered with granulated honey.

Upon examination of the sections, the greater part of the cells are found to be capped, and the honey under the cappings is liquid, but thick, and evidently in good condition. But in nearly every section a few cells are to be found, the cappings of which, although apparently sound, are bulged out, and show by their transparency that the cell is partly empty. On closer examination these cappings are found to be burst outward; and the honey that has not "sweated" out of them, as well as that contained in a few cells that have cracked by variation of temperature, or by handling, is as thoroughly granulated as that at the bottom of the case. Now why is the honey in the sound, sealed cells liquid, while all the other is granulated? Is it not evident that the one is sheltered from the action of the air, while the other is not?

Whether *all* honey-cappings exclude the air is perhaps doubtful, but that the bees "aim at compact coverings for their honey, while the sealing of the brood is porous (Cheshire)," makes no doubt for me. Evidently even this view is debatable, else Mr. Hutchinson would not be so eager for a discussion, and I shall be glad to see it fully ventilated, by him and others.

Now, as to the nature of cappings: If the reader will take a parcel of clean, white honey-cappings on the end of a knife and place it near a light—not too close—but near enough to melt it, he will have a pretty good idea of the nature of them. That ordinary honey-cappings are not absolutely free of foreign matter is easily comprehended, since the traveling of the bees over them, in the hive, is sufficient to alter their color in a few days. In addition, the yellow coloring pigment so well known to bee-keepers (and so little explained), and the impurities of the atmosphere, undoubtedly more or less contaminate the wax during the manipulation of this soft and plastic material.

Practically speaking, however, honey-cappings are pure wax, and if unmixed with propolis, cast skins or cocoons, from the cell walls, in extracting, will give little or no residue, except damaged beeswax.

I know that it is a popular opinion that the pale, clean, grainy looking residue often obtained in rendering wax over water is pollen. It looks like pollen-grains, but is pure wax, and any one who has tried the solar wax-extractor side by side with the water process, will testify to the fact that this so-called pollen residue is entirely absent in sun-rendered beeswax. On this subject I cannot refrain from recalling the experience of Mrs. Chaddock, who, after melting her wax 4 or 5 times over, and finding this residue more plentiful every time, came to the conclusion that it was all a sham, and that her beeswax was no beeswax at all.

Hamilton, Ills.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Local Convention Directory.

1887. *Time and place of Meeting.*

Jan. 11-13.—N.Y.State,E.N.Y., &c., at Albany, N.Y.
Jno. Aspinwall, Sec., Barrytown, N. Y.

Jan. 12.—Cortland Union, at Cortland, N. Y.
D. F. Shattuck, Sec., Homer, N. Y.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

Jan. 13.—Vermont, at Burlington, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Jan. 13.—Sheboygan County, at Hingham, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Jan. 18.—N. W. Ills. & S. W. Wis., at Rockford, Ills.
J. Stewart, Sec., Rock City, Ills.

Jan. 19, 20.—N. E. Ohio, N. Pa., &c., at Andover, O.
M. E. Mason, Sec., Andover, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM
OUR LETTER BOX

Bees Ready for Winter, etc.—I. J. Glass, Sharpsburg,⊙ Ills., on Dec. 3, 1886, writes:

I had just got my bees housed in the cellar when the cold wave reached us, and we have been having some zero weather since, as cold as 10° below. I have 92 colonies in winter quarters, all in good condition. The temperature ranges between 45° and 50°. I do not care how warm my cellar becomes so I can keep the temperature from falling below 45°. I am fully convinced that *cold* is the cause of bee-diarrhea. I had about 4,000 pounds of surplus honey this year, 1,800 pounds of comb honey, all of which is sold. I have only one barrel of extracted honey on hand yet. I disposed of the greater part in my home market.

Ten Years of Bee-Keeping.—L. D. Ormsby, Pierpont,♂ O., says:

I began the season with 77 colonies, and obtained 4,400 pounds of honey. This is the poorest season for bees that I have ever experienced. Next year will make ten years of bee-keeping for me, and I have been a faithful follower of your valuable Bee Journal. If you would like a ten year report from one of your readers, I will send it to you next year.

[Yes; send in the report, and let us see what you have done in ten years. —Ed.]

Bee-Keeping in Central Texas.—E. P. Massey, Waco,⊙ Tex., writes:

Bee-keeping in central Texas has about ceased to be pleasant or profitable. For the last two seasons I have not had 100 pounds of surplus from 50 to 60 colonies, although they began the winter with plenty, and came out with plenty of stores and bees. We have no field crop in this country that affords any honey, except cotton, and that does not yield it every season, and never very much. For several years previous to 1884 we got a good deal of honey from thistle and horse-mint, but these have about failed, and I cannot tell what will next turn up that will benefit us.

"'Tis hard to toil when toil is almost vain,
In barren ways,"

but I shall toil on for I do not want to give up my bees. A majority of our bee-men here have about abandoned the business. The extreme hot and dry weather in summer here is disastrous to the bee-keeper, and if he had to depend upon the business for a living here, it would not do at all. We had a very damaging disease among our bees last spring and summer, and many lost nearly all, and all lost more or less. I think it was bee-diarrhea, but others, as well or better informed than I, say it is not. Last spring opened early, and our bees gathered a large quantity of pollen, bred up rapidly, and later on we had a great deal of cool, misty weather, and all the old stores was consumed, and the bees had to fall back on the pollen. I believe that was the cause of the disease. I would like to have the opinions of some of the bee-masters on the subject, with a remedy.

Hard Year for Bee-Keepers.—C. A. Hallegas, De Kalb Junction,♂ N. Y., on Nov. 30, 1886, says:

This has been a hard year for bee-keepers throughout this section of the country. I commenced the season with 112 colonies, and afterward had 8 new ones. One was robbed out this fall, so I now have 119, which are in the cellar. I had about 900 pounds of comb honey, and the most of it was of poor quality. I had 50 colonies that did not have enough honey to winter on, and consequently I have had to feed considerable.

Red-Clover Italians.—H. M. Moyer, Hill Church,∽ Pa., writes:

Joseph Beath, on page 731, wanted to know whether any one has bees that work on the first crop of red clover. My bees (Italians) work, every year, on the first crop of red clover. This is nothing new in this locality. The black bees are not worth keeping here, should one get them as a gift.

Convention Notices.

☞ The eleventh annual meeting of the N. W. Ills. & S. W. Wis. Bee-Keepers' Association will be held in the Grand Army Hall in Rockford, Ills., on the third Tuesday in January, 1887. There will be a two days' session. J. STEWART, *Sec.*

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made. H. N. PATTERSON, *Sec.*

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 11, 12 and 13, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised. An unusually brilliant programme will be prepared and announced later. JNO. ASPINWALL.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Market is well supplied with all the grades, and the demand is light. Prices are nominal at 11@12c. for white in 1-lb. sections. Fancy white in scant pound sections, 13c. Very little extracted is being sold, and prices range from 4@7c.

BEESWAX.—22c. R. A. BURNETT,
Dec. 8. 161 South Water St.

NEW YORK.

HONEY.—In consequence of a large stock of comb honey on this market, fancy prices cannot be maintained. Fancy white honey in paper boxes, or glassed, are in better favor here than the unglassed honey, hence the difference in the price. We quote present prices as follows: Fancy white in 1-lb. paper boxes, or glassed, 13c.; same unglassed, 12c., and in 2-lb. glassed sections, 10@11c.; off grades 1 to 2 cts. per lb less. Calif. comb, 8@10c.; fancy buckwheat 1-lbs., 8¾@9c., and 2-lbs. 7½@8c. Extracted white clover, none in the market. Calif. ext'd, 60-lb. cans, 5@6c.; buckwheat, in kegs and barrels, 4@5c

BEESWAX.—21@23c.

MCCAUL & HILDRETH BROS.,
Dec. 7. 34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c. Extracted, 6@7c.

BEESWAX.—25 cts. per lb.

Dec. 7. BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—All kinds of honey are dull and lower. Best white comb honey in 1-lb. sections, 11@12½c. Extracted, 7@9c.

BEESWAX.—23c.

Nov. 23. M. H. HUNT., Bell Branch, Mich.

CINCINNATI

HONEY.—There is a lively demand for table honey in square glass jars, and the demand for nice comb honey is very good. Demand from manufacturers is slow for dark grades of extracted honey. The ranging prices for extracted is 3@7c. a lb. Nice comb brings 12@15c. per lb. in a jobbing way.

BEESWAX.—Home demand is good. We pay 20@23c. per lb.

Nov.10. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—The market is not very active and prices a little lower. Choice 1-lb. sections of best white sell at 13@14c.; second grade 1-lbs., 10@12c.; choice white 2-lbs., 11@12c. Extracted, slow at 6c.

BEESWAX.—Scarce at 25c.

Nov. 17. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of values. We quote 1-lb. sections of white at 12½@13c.; 2-lbs., 11½@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6½@7c.; in tin packages, 7@7½c.; in barrels, as to quality, 5@5½c.

BEESWAX.—No demand.

Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The market remains firm for choice qualities, of which we have a large supply on hand. We quote from 3¾@4¼c. wholesale, for extracted honey; and 8@12c. for honey in 2-lb. sections, although the latter sells only in a jobbing way at outside prices. Some fine honey in 1-lb. sections sells at 11@12c.

BEESWAX.—Dull at 20@22c. for the best.

Nov. 24. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.

Oct. 18. O. B. SMITH & Co., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12⅜c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c. Market dull.

BEESWAX.—Dull at 20c. for prime.

Nov. 17. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand is good for all grades, and receipts have been very large of comb and extracted. Home bee-men have kept out of the market until this month; having glassed every lb. section on both sides they are reducing prices, selling 60 lbs. of glass with 160 lbs. of honey, making our market lower. There crop is about 70,000 pounds. We quote; White clover 1-lbs., 12@13c.; 2-lbs., 11c; ½-lbs., 13@14c,; dark 1-lbs., 10c.; 2-lbs., 8@9c.—California 2-lbs., 9@11c. Extracted white clover, 6c.; dark, 4@5c.; white sage Calif., 5½c.; amber, 5c.

BEESWAX.—22c.

Nov.20. CLEMONS, CLOON & CO., cor. 4th & Walnut.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS,
923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now *so cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us three subscriptions—with $3.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

To all New Subscribers for 1887 we will present the rest of the numbers for 1886; so the sooner they subscribe the more they will get for their money.

◆

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

Five Thousand new subscribers to the BEE JOURNAL is what we have made our calculations for; they will come in clubs between now and next spring. Installments are coming every day.

◆

☞ The next annual convention of the Cortland Union Bee-Keepers' Association will be held in Union Hall, at Cortland, N. Y., on Jan. 12, 1887.
D. F. SHATTUCK, *Sec.*

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 25	1 25
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 70
Canadian Bee Journal	2 00	1 75
Rays of Light	1 50	1 35
The 7 above-named papers	5 25	4 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 75	1 60
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

◆

Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year? When you do so, please select any 25 cent book in our list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887,—will you not assist us to obtain them?

◆

The Report of the Indianapolis Convention is now published in pamphlet form, uniform with that of last year. It will be sent postpaid for 25 cents to any address.

We have also bound it up with last year's, together with the History of the Society: this we will mail for 40 cents. Or if you send us one *new* subscriber (with one dollar) besides your own renewal, we will present you with a copy by mail.

◆

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

◆

☞ The Northeastern Ohio, Northern Pa. and Western New York Bee-Keepers' Association will hold its 8th annual convention in Chapman's Opera House, at Andover, O., on Wednesday and Thursday, Jan. 19 and 20, 1887. First-class hotel accommodations are offered at $1 per day to those attending the convention. A general invitation is extended to all.
M. E. MASON, *Sec.*

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., **40** cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

◆

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.25.

◆

We would call Special Attention to the property advertised by L. C. Root, on page 733, in the issue of Nov. 17th. It is a choice property, and offers a rare chance for some person desiring to keep Bees under the most favorable circumstances. For particulars, address L. C. Root, Mohawk, N.Y.

Advertisements.

WANTED.—Some one with or without experience, but with some ready cash, to join me in rearing Bees and producing Honey, and to take a half interest in 100, 150, 200, or 250 colonies of bees. My honey crop the past season was 19,000 pounds. Correspondence desired.
M. M. BALDRIDGE,
50C2t ST. CHARLES, ILLS.

FOR SALE.

SEED from *Echinops Sphærocephalus*—commonly called "Chapman Honey-Plant." Price per ½ ounce, 75 cts.; per oz., $1.50; 2 ounces, $2 50. Warranted genuine.

Also all kinds of Bee-Keepers' Supplies: Sole right for Shuck Bee Hives and Feeders in Canada. The Stanley Automatic Honey-Extractors. Address,
E. L. GOOLD & CO.,
50A2t BRANTFORD, CANADA.

ATTENTION

Dealers and Manufacturers.

WE ARE prepared to furnish you with SECTIONS for the COMING SEASON at **bed-rock prices.** Write us.

G. B. LEWIS & CO.,
37Atf WATERTOWN, WIS.

IMPORTED Italian Queen in full Colony, only $8.00 —O. N. BALDWIN, Clarksville, Mo.
4A1y

Extracted Honey For Sale.

We have a large quantity of CHOICE **EXTRACTED HONEY** for sale, in kegs holding from 200 lbs. to 225 lbs. each, which we will deliver on board the cars at **7 cents** per lb. for White, and **6 cents** per lb. for Amber Colored. Orders solicited.

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How to Avoid them,
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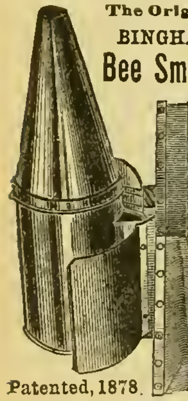

The Original BINGHAM Bee Smoker

ADDISON, Vt.—Have one of your smokers good yet—used 6 years. E. J. SMITH.

ELM GROVE, Mass.—Have one I have used six seasons—good yet. F. M. TAINTOR.

BORODINO, N. Y., Aug. 15, 1882.—All summer long it has been "which and t'other" with me and the Cyprian colony of bees I have—but at last I am *boss*—Bingham's Coqueror Smoker did it. If you want lots of smoke just at the right time, get a Coqueror Smoker of Bingham. G. M. DOOLITTLE.

Patented, 1878.

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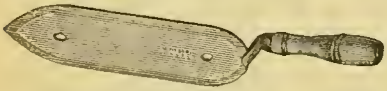

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BINGHAM SMOKERS and KNIVES have Revolutionized the Smoker and Knife Trade, and have made bee-keeping a pleasure and a success. They are the only **lasting** and **satisfactory** Smokers and Knives now used by experienced bee-keepers in Europe, Australia, Cuba, and America. They are covered by patents, and while they are always the **best** that can be made, they are also the **lowest priced.**

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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Send for Samples & Reduced Price-List
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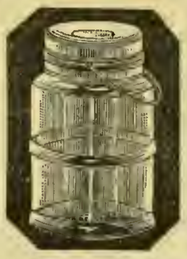
FOR HONEY.



THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen	.....	$1.60
" 2 pounds " "	.....	2.00
" 3 " " "	.....	2.50

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FIRST IN THE FIELD!

THE INVERTIBLE HIVE!

INVERTIBLE FRAMES,

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Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

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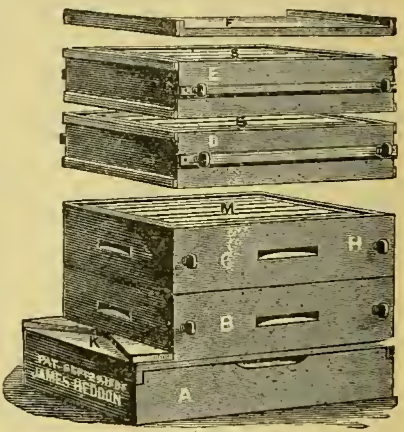
The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

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WANTED, an active, reliable man in every city and town in the State of Illinois to work up Councils of the American Legion of Honor, an insurance organization now having 60,000 members, and we are willing to *pay liberally in cash* for services rendered in this work. It can be performed at odd and leisure hours without interference with regular business, and is an occupation affording much pleasure to those engaged in it. For full explanation how to go to work and what to do, address

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AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Dec. 22, 1886. No. 51.

Ring out! ye glorious Christmas bells,
  Peal loud, and sweet, and clear,
And let your music, as it swells,
  Proclaim the peace-time here.

Ring out ! and while you peal, sweet bells,
  Oh ! let us humbly bring,
Those gifts, whose presence ever tells
  Each one to anthems sing.

Ring out ! Earth's lessons we must learn,
  As on we walk, each day ;
And Christmas hours, with each return,
  Mark mile-stones on our way.—*Ex.*

◆

It is said that there is only a very small part of a drop of poison in the sting of a bee. No matter how small the part, however, the *departure* of the person stung is sure. The bee "gets there" all-e-samee—but it parts with its sting.

◆

A Weekly Feast is presented to every reader, and the following letter from B. H. Holt, of Adel, Iowa, is a sample of hundreds just received from the guests who have been regaled at our weekly banquets during the past year :

> I like the American Bee Journal for the many good things which it presents each week. I always look for it with the assurance of finding a *feast* therein, and I am never disappointed. May its editor long live to calm the troubled waves of discussion, and to keep all its correspondents in good fellowship, is the earnest wish of a constant reader.

◆

The November Weather in England has been open and fine. A writer in the London *Journal of Horticulture* gives the following facts about the bees there during the past month :

> Up till Nov. 26 the weather has been open and fine. The bees carried pollen up until that date, when the winter's fog commenced. Some colonies have increased in number of bees greatly during the month. The calm, sunny weather, permitting the bees to fly, and the young ones to clear themselves of all incumbrances as late as the 25th, will counteract other evils which, had the weather been untoward, were sure to have followed so much late breeding. The temperature of the month has not only been mild, but remarkable for the equality of the day and night temperature. For some nights and days together there were only 4° difference in the day and night temperature.

"Here we have an Objection to the Union," says the *Canadian Bee Journal*, and then it proceeds to give the reason for objecting in this language :

> Bee-keepers who have ill-feelings towards their neighbors have a good chance to vent it. They join the Union and then call on their neighbors to "come on," feeling that the Union will assist them, and their costs will be light, while the defendant will have to foot his own bill. Thus they can "stick" their neighbor for a lot of costs, and themselves escape almost "scot free." We are therefore in favor of a voluntary and *impromptu* defence by bee-keepers generally, each giving what they are able to in the defence of "right and justice," when they satisfy themselves that the case calls for such a defence.

The writer appears to have been sadly "mixed up," when framing the above paragraph. The bee-keeper who joins the "Union," and says to his neighbor "come on," is the defendant, if that neighbor does "come on" with his lawsuit ; but the item calls the "neighbor" the "defendant," and says he "will have to foot his own bill !"—Say plaintiff, brother—just to make sense !

The writer is also in error concerning the "National Bee-Keepers' Union." It does not work on the plan mentioned in the above editorial extract. It only *assists* in the defense of the pursuit of bee-keeping, after investigating the cause of the trouble. If it is but a personal quarrel, the Union does not interfere with it. If, however, there is a principle involved, or the pursuit is "at stake," the Union *helps* to defend the case by paying something like one-half of the costs, while the "real defendant" pays the other half. It does not by any means let the members of the Union "stick their neighbor for a lot of costs, and themselves escape almost scot-free," as stated in the item quoted above.

◆

In Switzerland, as well as throughout Europe (says Mons. E. Bertrand, of Nyon, Switz.), the past season has been very poor for honey. The first honey-flow was almost nothing ; the second, where there was any, was better, but that honey is of a dark color and second grade.

Our friend, Mr. Bertrand, was elected an honorary member of the North American Bee-Keepers' Society, at Indianapolis, and acknowledges the honor in a very polite letter to the editor of the American Bee Journal, who proposed the honor, and the following to the President, Dr. C. C. Miller, of Marengo, Ills. :

> Nyon, Switzerland, Nov. 26, 1886.
>
> *Sir* :—I see by the report of the proceedings of the convention held at Indianapolis, that I was elected an honorary member of the North American Bee-Keepers' Society.
>
> Allow me to thank you and the association for the honor which you have conferred upon me. I feel highly flattered in being an honorary member of the leading society in America.
>
> I have the honor to remain, sir, yours truly,
> Ed. Bertrand.

◆

Water is essential for bees in cellars, and quite often it has restored bees to their normal condition, after a "roaring" in the hive is heard, which is caused by excessive thirst and prolonged low temperature.

German Bee-Papers.—On page 707 we commented on the assertion made at the Indianapolis Convention that "we have a greater number of apicultural papers" than "all the rest of the world combined." We then stated that "Germany *alone*" has "more than all the rest of the world combined." The *British Bee Journal*, for Dec. 2, not only affirms our remark, but gives a list of 23 German bee-papers devoted exclusively to bee-keeping ; not including any that combine bee-culture with something else, of which there are a large number. Here is the list :

1. Bienenzeitung. Editor, Fr. Wilh. Vogel. Price M 6.50.
2. Deutsche illustrierte Bienenzeitung. Editor, C. J. H. Gravenhorst. Price M 4.
3. Schweizerische Bienenzeitung. Editor, Pastor Jecker, Olten. Price M 4.
4. Der elsassisch-lothringische Bienenzeitung. Editors, J. Dennler, Enzheim, & C. Zwilling, Mundolsheim. Price M 3.20.
5. Centralblatt. Editor, G. Lehzen. Price M 3.
6. Die Biene. Editor, Lehrer Oswald, Darmstadt. Price M 3.
7. Deutscher Bienenfreund. Editor, L. Krancher. Price M 3.
8. Preussische Bienenzeitung. Editor, J. G. Kanitz. Price M 2.50.
9. Bienenblatt. Editor, J. B. Kellen. Price M 2.40.
10. Der schlesische Imker. Editor, J. F. Benda. Price M 2.40.
11. Illustriertes allgemeines deutsches Bienenorgan. Editor, M. Felgentreu. Price M 2.
12. Oesterreichisch-ungarische Bienenzeitung. Editor, P. Colestin Schachinger. Price M 2.
13. Schlesische Bienenzeitung. Editor, G. Seeliger. Price M 2.
14. Die Biene und ihre Zucht. Editor, Rud. Kern. Price M 2.
15. Biene. Editor, Pastor Hergenrother, Hesselbach. Price M 1.60.
16. Die Bienenpflege. Editor, Dr. Wilh. Ebel. Price M 1.25.
17. Munchener Bienenzeitung. Editor, Dr. Stautner, Munich. Price M 1.20.
18. Pfalzer Bienenzucht. Editor, Lehrer Sauter, Rodenbach. Price M 1.
19. Blatter fur Bienenzucht. Editor, S. Baumann. Price M 1.
20. Illustrierte Bienenzeitung. Editor, G. Adolphson, Zurich.
21. Leipziger Bienenzeitung.
22. Blatter fur Bienenzucht, Ungarn. Editor, J. Kriesch.
23. Bienenfreund von Niederbayern.

◆

Premium Worth Having.—The New York *World* and the American Bee Journal (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such club subscriber a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

This "History" will be sent free by express at the subscriber's expense ; or will be mailed for 10 cents extra to any place in the United States or Canada.

It is arranged chronologically by years, from 1492 to 1885. Every event is narrated in the order of its date. These are not confined, as in other works, to political matters, but embrace every branch of human action.

This premium is worth the whole of the money sent for both periodicals, and should induce thousands to subscribe, and thus get two unrivalled weeklies for nothing.

◆

Catalogues for 1887.—Those on our desk are from

Dr. G. L. Tinker, New Philadelphia, O.
Thos. G. Newman & Son, Chicago, Ills.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Cleansing Flights in Winter.

Query, No. 350.—Some advise giving bees a cleansing flight during the winter; others, put them into a cave or cellar and let them severely alone until it is time to put them on the summer stands again. Which is best? I, for one, would like to know, as I have no anxiety to carry 120 colonies out of the cave and back again if it does no good.—Iowa.

Let them alone.—W. Z. HUTCHINSON.

I do not carry mine out until they are taken out to stay.—C. C. MILLER.

If they remained quiet I would leave them alone until well settled weather in the spring.—H. D. CUTTING.

If the bees are quiet in their quarters, and show no uneasiness, I should let them alone.—J. P. H. BROWN.

Leave them in until spring. Giving them a flight causes them to breed, and they are more restless afterwards.—DADANT & SON.

I should leave them severely alone. If some of the colonies were diseased so as to be likely to die before spring, I might give them a flight. If the disease was caused by impure stores, it would be beneficial. I have thought that a flight sometimes made matters worse.—C. W. DAYTON.

From what I have read, I conclude that if the general conditions are right, viz: an equable temperature ranging from 40° to 50°, Fahr., in a perfectly dark cellar, no cleansing flight is necessay.—J. E. POND, JR.

Never move them unless they become uneasy and soil the hive. If a cellar is just right there will be no need of any removal from Nov. 1 to April 1. We have not removed our bees for years during winter, and they winter splendidly.—A. J. COOK.

Owing to the dampness of the atmosphere in this climate, in the winter months, I doubt if it would be possible to winter bees at all without the opportunity for flight in the air two or three times during the winter months. But in a higher latitude where the air is comparatively dry—a condition of things favorable to healthful exhalation from the bodies of the bees—I doubt not but the case would be different. Those who have tried it can tell best.—G. W. DEMAREE.

After practicing both I have come to the conclusion that only harm comes from such a flight, say nothing of the labor. Where bees are wintered on the summer stands the case is different.—G. M. DOOLITTLE.

I prefer the latter plan—put them in early and take them out late. Long confinement does no harm, if other conditions are right. In this I think Mr. Eugene Secor is right, and Mr. G. M. Doolittle in error.—JAMES HEDDON.

Bees in winter quarters require no flight until they can fly to some purpose. We often have pollen gathered here early in March, when they may be put out and returned after cold sets in again. In February, on a suitable day, I would set out 1 or 2 colonies, and observe if they needed a cleansing flight. If doing finely they often discharge nothing; hence a flight would be of no benefit until there was food to gather. On Dec. 11 we had a fine day, and I put out 2 colonies that were carried in Nov. 13. They had been nicely hibernating, but I wanted to see the effect. After four days they had not again assumed their former state, being very easily disturbed. I would say, then, not to put bees out before February, at the earliest, and then not unless diseased.—G. L. TINKER.

Closed-Top Sections.

Query, No. 351.—A bee-keeper in Iowa prefers closed-top sections; but in tiering-up he uses open-top sections. Is it an advantage to have the first case and the one on top made thus? and will the combs (of course they cannot be inverted) be as straight with closed-top sections?—Augusta, Iowa.

I see no advantage in closed-top sections anywhere.—W. Z. HUTCHINSON.

It is a disadvantage to have two sorts of sections on the same hive.—J. P. H. BROWN.

We would prefer open-top sections for every purpose.—DADANT & SON.

The combs will be just as straight with closed-top as open, if you use full sheets of foundation or separators. I prefer an open-top section, as I want to "tier-up."—H. D. CUTTING.

I use open-top sections, and can see no advantage in those having closed tops.—G. M. DOOLITTLE.

I should not expect combs to be quite as straight with closed-top sections, but I have never tried them.—C. C. MILLER.

I should always prefer the open-top sections. This permits tiering-up, and enables one to see just what is going on.—A. J. COOK.

Closed-top sections are no advantage, as they can be made *closer* with a cloth spread over the top of the case or rack. The open-top sections are necessary to the "tiering-up system," and the latter is necessary to the best results.—G. W. DEMAREE.

Never use both kinds on the same hive, or in the same apiary; in fact, never use closed-top sections at all. They are not good about getting straight combs, tiering-up, handling in and out of shipping-crates, seeing the condition of the super, and so bad that they are almost totally abandoned.—JAMES HEDDON.

The combs will be built as straight with closed-top sections as with open-top ones, but the former have no advantages over the latter. I prefer a thin board with a bee-space beneath to cover the sections. Many use enameled cloth.—G. L. TINKER.

I do not think there is any advantage in using closed-top sections in any case. Open-top sections can be easily closed, but closed-top sections cannot be conveniently used in "tiering-up." I prefer the open-all-around sections.—J. E. POND, JR.

Wintering Bees Under a Kitchen.

Query, No. 352.—Do you think that it would injure the bees to put them in a cellar under a kitchen where there is lots of noise?—F. H., Ills.

Not unless they are to be jarred.—DADANT & SON.

No, not if so placed that they are not jarred.—G. M. DOOLITTLE.

No. I have wintered bees in just such a place for several winters.—W. Z. HUTCHINSON.

I do not think that the noise would injure them, provided no vibratory or jarring motion was communicated to the bees.—J. P. H. BROWN.

The warmth of the kitchen fire above the bees would more than counterbalance any harm from the noise.—G. L. TINKER.

It would not injure them, but might rouse them somewhat at times.—C. W. DAYTON.

If all right otherwise, I doubt if the noise would do much harm.—C. C. MILLER.

No, not if other conditions are all right.—JAMES HEDDON.

Bees must be quiet to winter well. Unless you can keep them so in the cellar, I would advise leaving them on the summer stands well packed.—H. D. CUTTING.

I know nothing practically of cellar wintering of bees, but from what I know about the effects of "noise" on bees, I should have no fears that my bees would be injured from that cause.—G. W. DEMAREE.

I should prefer "under a kitchen" to any other place. This gives a chance for ventilation. The noise will do no harm. I know a man who has wintered his bees very successfully, and he has some loud boys, I tell you! None too loud; boys that make no noise will make men of like character.—A. J. COOK.

Practically, I know nothing of the matter, as I have always wintered my bees on the summer stands, but if the cellar is all right otherwise, I do not think the noise will affect the bees at all. It is all theory on my part, but the theory is based on my reading, and general observation.—J. E. POND, JR.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; ⊶ east; ⊷ west; and this ♂ northeast; ⊷ northwest: ⊶ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

The Michigan State Convention.

SECOND DAY—MORNING SESSION.

The first thing on the programme of the 2d day was the election of officers, which resulted as follows: President, Geo. E. Hilton, of Fremont; 1st Vice-President, R. L. Taylor, of Lapeer; 2nd Vice-President, O. J. Hetherington, East Saginaw; 3rd Vice-President, John Rey, East Saginaw; Sec., H. D. Cutting; Treas., M. H. Hunt.

It was decided that the next annual meeting be held in East Saginaw, and Prof. Cook, W. Z. Hutchinson, and H. D. Cutting were appointed a committee to confer with the State Horticultural Society to determine if it will be advisable for both societies to meet at the same place, and during the same week, but upon different days. Many persons wish to attend both meetings, and this arrangement would be a great saving to them in railroad fares.

BASSWOOD VS. LINDEN.

Dr. A. B. Mason read from the *Canadian Bee Journal* the article on page 167, of the current volume, headed "Linden Honey," in which Mr. S. T. Pettit, President of the Ontario Bee-Keepers' Association, reported that the committee took the grounds that Canadian "basswood" honey was superior to the United States article, and recommended that the Canadians adopt the name "linden" for *their* honey, and thus distinguish it from the inferior "basswood" honey produced across the line. The Doctor thought it perfectly right to make Canadian articles distinctively Canadian, but it should not be done by casting unwarranted stigmas upon *our* productions. We should not try to elevate ourselves by pulling down others.

Mr. Macpherson, of Canada, evidently felt that the laugh was at his expense, but he bore it good humoredly, and said he did not think there was any *intention* to cast a slur upon American honey, and he doubted not that an apology would be forthcoming.

Dr. Mason then read an essay on

FEEDING BEES FOR WINTER.

He works to secure the greatest possible amount of white honey as surplus, depending upon the fall honey-flow to furnish stores for winter. The fall flow of honey is sometimes a failure, and he then resorts to the feeding of sugar syrup. He feeds by raising the front end of the hive and pouring the syrup in upon the bottom-board. He found it necessary to do this work at night, to avoid trouble from robber bees. In feeding 6 pounds of syrup, he found there was a loss of 1½ pounds.

Mr. Macpherson—Mr. D. A. Jones once fed in this manner, and the work was done at night to avoid the robber bees. He has discarded this plan for feeders.

Dr. Mason—I got a sample of the Heddon feeder, and it is a fine thing, but it is rather expensive.

R. L. Taylor—I object to feeding by pouring the feed upon the bottom-board, as it necessitates fast bottom-boards, and even then a hive may leak.

Dr. Mason—What is your objection to a fast bottom-board?

R. L. Taylor—I wish it loose so that I can clean off the dead bees in the spring; I can regulate the size of the entrance by moving the hive forward or back, and I do not wish any bottom-board upon the hives when they are in the cellar.

W. Z. Hutchinson—How do you get the bees off the bottom-board when you carry them into the cellar?

R. L. Taylor—There are seldom many upon it; and I raise the cover and brush them off into the hive.

A. I. Root—When robber bees are troublesome, we do a good share of our work with bees at night by the light of a lantern.

R. L. Taylor—I have tried working as late in the day as possible, and the darker it became the more troublesome were the bees, until it was well nigh impossible to handle them.

W. Z. Hutchinson—Have you ever tried handling them by an artificial light?

R. L. Taylor—I never have.

A. M. Gander—If any one expects to be obliged to feed, why would it not be best to save frames of honey for the purpose?

Prof. Cook—This brings up the question of the advisability of securing all the white honey we can in sections, and then feeding sugar for winter stores.

Geo. E. Hilton—I should not dare to use sugar even for wintering, as I care too much for my reputation.

Prof. Cook—I do not think any one need have any fear in regard to his reputation. There should be no attempt at concealment. The neighbors should be allowed, yes, invited, to come and see what was done with the sugar, and the whole matter explained to them. Further than this, if it is decided that sugar is a safer food for winter (and I think it is), and that it can be used for this purpose at a profit, bee-keepers will use it, and we may talk about "reputation" as much as we please. The question is, will it pay? If we can get all our white honey in nice shape for market in sections, and the brood-nest comparatively empty, and all we will have to do is to put on feeders and feed, it will probably pay.

R. L. Taylor—It will probably pay *one* to do so, if everybody else does not go at it; if they do, I do not know whether it will or not. We cannot make it pay to feed bees when they must build their own combs; but when the combs are built, then it will pay. It is a mistake to suppose that sugar stored in the brood-nest for winter stores will be carried into the supers in the next honey harvest. We frequently have a flow of dark honey in the fall. Is any one ever troubled by this dark honey being carried into the sections the next season?

Geo. E. Hilton—I have been troubled in exactly this manner.

W. Z. Hutchinson—How large are the brood-nests of your hives?

Geo. E. Hilton—Eight Langstroth frames.

Dr. Mason—I have no fears of losing "reputation" by feeding bees sugar for winter. The first year I fed sugar to my bees I bought it of neighboring grocers, and took pains to inform them and my neighbors just what I wanted it for, and *why* I used it. There was some "talk" that year, but it has all died away, and I hear nothing of it now.

W. Z. Hutchinson—I have fed sugar to bees now for years, and made no secret of it. Sometimes one neighbor and sometimes another hauls the sugar from the depot. The whole neighborhood knows that I feed sugar to the bees, and when and *why* I do so, and no one buys any less honey.

A. I. Root—In view of the prevalence of foul brood, it is hardly the thing to advise the buying of honey to feed bees when they need feeding. It is better to buy sugar.

F. H. Macpherson—When we feed sugar syrup we lose just about the weight of the water added. We do not think it profitable to extract the honey and feed sugar, but in producing comb honey it probably pays.

W. Z. Hutchinson—In preparing the syrup I use Florence lamp stoves.

R. L. Taylor—I use a gasoline stove.

The next topic discussed was that of

BEES AND GRAPES.

Prof. Cook—We can safely say that bees do not injure sound grapes. In the fall, when they are over-ripe, and the weather is just right, the grapes crack and then the bees make trouble. Which is practical, to shut up the bees or to protect the grapes? or is neither? In some places grapes can be raised only by bagging them, because of the rot. This bagging greatly improves the grapes and furnishes a protection against bees as well as rot.

P. M. Puhl—It is not practical to shut up the bees, as the grape harvest lasts too long; and grapes are too cheap (one cent per pound) to allow the expense of bagging. I have tried confining bees during the time of gathering grapes, and it cannot be done. The bees are breeding, and it is hot weather, and they must have water and flights in the open air. I have put them in the cellar, and kept the temperature at 45°, and it is no better; it is not the time of the year when bees can be confined—they are not ready for it, and will worry themselves to death. I am sorry that Mr. McLain said what he did in his report about confining them; it is impractical.

Dr. Mason—It is best to keep on the right side of our neighbors, then they will put up with some inconvenience from the bees.

A. I. Root—Mr. L. C. Root once told me how careful he was not to allow his bees to annoy his neighbors. When his neighbor was ready to make hay in a lot adjoining Mr. Root's bees, Mr. Root offered, yes, insisted upon doing the work next to the bees, for fear that the neigbor or his horses might be stung. When neighbors live like this there is little danger of any fault being found with the bees.

R. L. Taylor—I agree with what Dr. Mason and Mr. Root have said. I fear that no good can come of legislation. I also fear that the Bee-Keepers' Union only stirs up things, *i. e.*, it "backs up" bee-keepers and makes them less careful. Many of these lawsuits grow out of some old feud, and a member of the Union may be "spoiling for a fight" with some neighbor, and takes advantage of the "backing" furnished by the Union to lead some enemy into a lawsuit. Were it not for the Union he might be less belligerent.

H. D. Cutting—I have no faith in legislation in this matter. It will simply be a question of "the survival of the fittest."

Prof. Cook—I firmly believe that this question must be eventually settled by law, and that, too, in the highest courts; and here we shall need the Union. When the question is carried to the highest courts and settled, the bees will remain, as it can be proved, and our best horticulturists now admit, that grapes cannot be successfully grown without the aid of the bees in fertilizing the blossoms.

R. L. Taylor—If these are the facts, and horticulturists can be convinced that they *are* facts, there will be no lawsuits.

The next subject brought up was

MARKETING HONEY.

R. L. Taylor—It may not be the best way, but I send my honey to commission men.

Geo. E. Hilton—I sell my own honey; or leave it with grocers to be sold on commission.

John Rey—I have built up a good home market by scattering the AMERICAN BEE JOURNAL "Leaflets," and by advertising the honey in the local papers. I give the editors some honey, and they tell how nice it is, and you ought to see the orders for honey come in! I never allow a section or package of any kind to go out that does not bear my address.

A. I. Root—We always take especial pains to keep different kinds of honey put up in all styles and sizes of packages all ready for customers. It is quite a point to be ready at a moment's notice to hand out just what a customer asks for.

Dr. Higbie—We must advertise; have a neat little sign, "Honey for Sale," to hang out.

Geo. E. Hilton—This matter of marking our sections and crates is important. I stencil each side of my crates, and also put a large display card in each crate, and on the card this is printed: "Nice clover honey from the apiary of Geo. E. Hilton, Fremont, Mich." This card the grocer can hang in some conspicuous place.

Dr. Ashley—I try to keep up the market, but the trouble is that some farmer with a few colonies brings in his honey, in poor shape perhaps, and sells for whatever the grocers will pay him, and this demoralizes the market.

A. I. Root—Buy him out.

Prof. Cook—This plan will answer when a man has a "big factory and lots of money," but every bee-keeper cannot buy all the honey that somebody is bound to give away.

Next came a few words about

HONEY AT FAIRS.

H. D. Cutting—I consider Fairs one of the greatest educational institutions we have. The Michigan State Agricultural Society has dealt very liberally with bee-keepers, but if bee-keepers expect to keep the premiums at their present figures, they must turn out better than they have lately.

Prof. Cook—When I was over in Toronto, it was astonishing to see the amount of honey that Mr. Jones sold at the Fair. One way was to cut sections of honey from corner to corner, selling each piece for 5 cents.

W. Z. Hutchinson—I should think there would be trouble from "visitor" bees.

F. H. Macpherson—We kept the honey under wire dish-covers.

A. I. Root—We sell honey at our Fair, and have no trouble with bees, but none are allowed to load up and get away. I visited all the candy, cider and lemonade stands, furnished each proprietor with a "shingle" and extracted a promise that it should be used in killing every bee that attempted to load up. The Fair ground is near our apiary, and the Fair lasted three days during a dry time, yet there was no trouble.

It is a pretty hard matter to knock Dr. Mason "off his pins," but it was very neatly done at this point, by making him an honorary member.

The committee appointed for the purpose, then made the following

REPORT ON EXHIBITS.

We beg to report as follows on the exhibits at this meeting:

Mr. M. H. Hunt showed a Clark smoker, Bingham honey-knife, very nice sliced sections, wire embedder, wired frame, division-board, metal rabbets, two styles of bee-brushes, twined coil wire, and a sample of the Hunt chaff hive.

H. D. Cutting showed the Cutting saw-arbur, very useful for bee-keepers, and of a nice size.

Mr. John Rey had on exhibit his fruit can bee-feeders, which he claims as robber-proof; a bee-veil with isinglass front, sections with foundation fastened at both top and bottom, and sections of honey where the foundation thus fastened had been used; nice samples of honey in glass buckets; also the Stanley extractor for four frames.

Dr. G. L. Tinker had on exhibit his beautiful four-piece sections in basswood and black walnut.

A. D. D. Wood showed sand-papered one-piece sections in basswood and white poplar; also four-piece poplar sections.

A. M. Gander exhibited honey in cases of different sizes; also bottles of the Muth description; honey in sections, and a combined frame and hive.

T. F. Bingham, of Abronia, Mich., had the "Doctor" smoker and the Bingham honey-knife, both of which are well known.

Dr. A. B. Mason, of Wagon Works, Ohio, showed three samples of granulated honey, and a sample of the same liquified, all of which is very interesting. Also some heads of the Chapman honey-plant, just about to bloom; which is another proof of the value of the plant, showing, as this does, its hardiness.

Mr. T. F. Bingham also showed the surplus honey department of the stingless bees of Honduras.—*F. H. Macpherson, A. I. Root, and Geo. E. Hilton.*

Mr. A. I. Root then called attention to a

QUEEN-EXCLUDING TOP-BAR.

This was exhibited by Mr. A. M. Gander. The frame had a double top-bar, *i. e.*, two top-bars one above the other, *a la* Demaree; and in a slot, extending the whole length of the upper top-bar, was slipped a strip of perforated zinc. The upper top-bar is wide enough to make the top-bars close-fitting.

T. F. Bingham—We have here a fine illustration of what a patent will do in the encouragement of invention. This is clearly an attempt to secure, in a different manner, the same results as Mr. Heddon does with his honey-board. There are these objections to it: To make a set of frames requires more pieces than to make an ordinary set of frames and Mr. Heddon's honey-board in the bargain; then the propolis will accumulate along the edges of the top-bar, and it entirely prevents the adoption of the "contraction method" without on immense amount of complication.

W. Z. Hutchinson—What advantages do you claim for your frame, Mr. Gander?

A. M. Gander—When I use a honey-board, and take it off, the bottom of it is covered with brace-combs, and I do not like this.

W. Z. Hutchinson—Why do you remove the honey-board?

A. M. Gander—Why, to handle the frames.

W. Z. Hutchinson—Why do you handle the frames?

A. M. Gander—In the fall I wish to take out some of the combs.

Mr. Bingham then made a few remarks on

WINTERING BEES.

He considered it important to put a rim 1½ or 2 inches wide under each hive in winter. It allows the bees to cluster naturally upon the lower edges of the combs; the dead bees and rubbish can drop out of the way, the combs are always dry and clean, and the entrance never clogged. He advised its use both out-of-doors and in the cellar. His bees are kept upon platforms. He prefers three hives upon each platform, and the platform is 2x6 feet in size, and raised from the ground perhaps a foot. The bees are prepared for wintering by packing them in fine hay upon these platforms. The hives are moved near together, and raised a few inches in such a manner as to give them a slight slant towards the entrance. Hay is packed under them, around the sides and over the top. On the top it is 14 inches deep. Panels of boards are used, too, for keeping the hay in place, and the boards are held together by nailing on strips of hoop-iron around the corners. Of course all is served with a roof. There is a spout or bridge from each entrance to the outside. This spout is ⅞ of an inch high, several inches wide at the back end, but tapers to one inch at the outside, where it meets an auger hole bored in the outer boards. After packing, the bees receive no more attention until it is time to make ready for the surplus. Mr. B. has been uniformly successful in wintering bees.

Mr. Root had tried closing the entrances, and also leaving them open. He favored a generous entrance, left wide open.

The convention then adjourned *sine die*. W. Z. HUTCHINSON.

For the American Bee Journal.

Legislation for Bee-Keepers.

C. G. BEITEL.

On page 742, Dr. C. C. Miller desires the views of bee-keepers on the desirability and feasibility of obtaining certain legislation looking to the securing of bee-keepers in their locations as to territory. I presume the idea is to ask Congress for this protection. If each State was to legislate for its own bee-keepers, we Pennsylvanians could hardly consider it feasible, for to legislate for the protection of bee-keepers would be class legislation, and the courts of this State are opposed to such legislation, and while it is true that the courts do not make the laws, yet they construe them, and always most strictly against the class, and most favorable to the general public.

We have many laws that come within the above category, and the same laws may be found upon the statute book of other States, viz: mechanics' lien laws, for the protection of mechanics and material men; for laborers, to protect their wages, and many others. I merely mention these to show what I mean by class legislation. Many of these laws are fruitful sources of litigation, and to such an extent has it been carried, that it is hardly safe to file liens, except under the supervision of a good lawyer.

In addition to this, the new constitution of Pennsylvania, adopted by the people in 1873, contains a clause, in which among other things it is provided "that the General Assembly shall not pass any law granting to any corporation, association, or individual, *any special or exclusive privilege or immunity*;" and while this does not prohibit the legislature to pass such laws for *a class* of individuals, in so many words, yet in spirit it surely does, and while we find no such prohibition in the Constitution of the United States, I doubt not that the spirit expressed in ours, would govern Congress in considering such a bill, because in principle it is antagonistic to our free institutions.

Again, when we scan closely a law such as is contemplated, we cannot fail to perceive what a source of litigation it might lead to—the question of priority of location would often be as difficult to establish as that of priority of invention, and unless Congress in enacting such a law would give jurisdiction to State courts to try these questions, they would have to be tried in the United States courts, the same as patent-right questions, which would entail enormous costs and expenses on litigants, who rather than incur them, would abandon their rights, and thus render the law nugatory.

These few hints might be greatly elaborated, but they are sufficient for me, to decide not only against the *feasibility*, but also against the desirability, looking at it simply from a legal stand-point.

Easton, Pa.

For the American Bee Journal.

The New Races of Bees.

S. SIMMINS.

With regard to the temper of these bees, I intend to confine my remarks to the character of those workers produced by *imported* queens only, and by so doing I hope to enable those as yet unacquainted with them to choose the good and refuse the least desirable kinds; and after obtaining the varieties recommended, I feel no hesitation in saying that the truth of my words will be fully sustained.

I would ask those who have tried only one or two queens of either kind, whether they consider it fair to run down these bees upon so slight an acquaintance, and what is really no experience at all. Are they certain that their one queen was imported? To get at facts we must start at the fountain-head, or we shall never find the truth if the adverse reports given emanate from those who do not have pure bees.

With regard to Cyprians, my own experience is completely at variance with that recorded by many. It may surprise some readers when I say that of all bees yet known, I would rather work with Cyprians than any other variety. I do not for a moment say that those who have given unfavorable reports, may not have started with a vicious lot, but I do assert that out of more than a dozen colonies headed by imported queens, I have not one which cannot be handled without smoke at any time of the day, on dull days, windy or fine days, or whether honey is coming in or not; not the least of their good qualities being that they can be shaken from the combs cleaner and more quickly than any others, and yet while being handled very few fly into the air. They will continue to breed and store while Italians are starving, but unlike the latter they are not suitable for comb honey production, as their cappings lie close upon the honey, presenting a damp-looking surface. The workers are extremely beautiful and pleasing to the eye, and when properly handled, are as gentle as they are beautiful. The queens are very prolific, and will work a colony up to full strength in a remarkably short time.

That these bees are a most valuable acquisition to an apiary, no one who has *thoroughly* tested them can deny; but the reports as to their vindicative temper have restrained many from keeping them. I do not know whether those who speak ill of them use smoke while manipulating; if so, it explains the whole thing, as its application is a fatal error, and certain to arouse their ire. I use none, but gently turn back the quilt, wait a moment or two, and then with a quiet, firm motion do all that is required. Upon first removing the quilt a slight hissing noise of wings is heard, but this is caused more by the bees running from the light than by those coming up, and even if they boil over on top of the frames, if the operator will only proceed as advised, he will be surprised to find that not one bee has any intention of stinging, and they may be shaken off the combs like so many flies.

One writer says that upon the slightest jarring many infuriated bees will fly out and sting him; perhaps they will if smoke has been used, but without it I have divided strong colonies in several stories, and some jarring could hardly be avoided; I have carried full colonies into my manipulating house on a dull day (to prevent chill), and have cut out a score of queen-cells at a time, with no stings, and hardly a bee has flown from the combs. And let it be noted that no matter how long the frames are left uncovered, or what length of time the operator may be about what he is doing, the bees remain good-tempered and perfectly at rest, provided only as before stated, that no smoke be used.

I have given many facts, but need I give more to prove that Cyprians are coming to stay? In time to come those who now condemn them will be forced to acknowledge the merits of these extraordinary bees, or be content to fall behind in the great apicultural race of keen competition.

Mr. G. M. Doolittle has discarded Syrians because they would breed too extensively when bees are not wanted, and not well enough early in the season; also that they are very vicious. About half of my own Syrian colonies can be handled easily without smoke, while the rest are most difficult to manage; but if they were a desirable race to cultivate, there is no reason why all should not be bred from those queens which give the more gentle bees. With regard to breeding at the wrong time, I believe Mr. D. is right, though for this very reason they may and do suit other countries where winter is not seen. Even this disposition might be modified after the lapse of two or three years, and their brood-rearing be regulated according to the state of the climate in which they may find themselves. However, they have no desirable traits other than what the more beautiful Cyprians possess, while they are not so quiet under manipulation as the latter; I have therefore decided that I have no use for them.

The Palestines are even more uncertain in temper than Syrians, while they have an unpleasant habit of biting the fingers of the operator, they also develop laying workers more persistently than any of the races yet named, and the probability is that there will be no permanent demand for them.

Carniolan bees are, without doubt, the most easily handled of all, as almost any amount of rough treatment fails to make them bad-tempered; and yet they are not surpassed by any in defending their homes against intruders of their own kind. Contrary to the statements of some, I have found that this race is quite distinct in character and appearance from the common black bee. The queens are generally dark, but bronzed on the underside of the abdomen, while many have yellow bands, and some are quite yellow; yet all produce workers of the typical sort. The latter should show no yellow bands, but upon the first segment of the abdomen is generally found a scarcely distinguishable shade of that color, and then follow several extremely broad, white bands, giving the bee a very beautiful appearance.

As regards their working capabilities, they are superior to either Italians or natives, and in building up in the spring, surpass all but the Cyprians. They are extremely active when anything is to be obtained, while in dull weather, and during winter they are particularly quiet, and bear confinement during a journey better than any bees I have known. Here we have the secret of their remarkable wintering qualities, and if this good point alone be considered, where is the apiary in your northern latitudes, or in our own uncertain climate, that can afford to do without them?

While Cyprians are more suitable for extracting purposes, Carniolans, though not quite so good honey-gatherers, are particularly adapted to the production of comb honey; while a cross between a Carniolan queen and a Cyprian drone will give an "all-purposes" bee not to be excelled by anything yet found. Just here is a fact which must convince all that Carniolans are quite distinct from blacks. In crossing the latter with yellow drones, generally only one band of yellow is shown in the worker, never more than two; but when mated with a Cyprian drone, many of the bees from a Carniolan queen, though very large, will be marked like Cyprians, others not so bright, but of better color than any Ligurian bee. A Cyprian queen mated with a Carniolan drone does not produce a single dark bee, and all have 3 yellow bands, while the color is but a shade darker than the pure yellow variety. Each of these crosses may be handled either with or without smoke.

Carniolans are not quite so steady on the combs in handling as Cyprians, neither are they so easily shaken off, and when they are so treated a great many fly around. Though equally as good tempered, it is here that my preference comes in for working with Cyprians. I can find no other fault with Carniolans, but another good quality possessed by them must not be overlooked—I find them longer lived than any other variety, a point of even more importance than their extraordinary breeding powers—one which in connection with their perfectly restful condition under confinement, renders them particularly desirable for all cold and uncertain climates.

I am aware that some who have had but one or two queens of this kind have spoken unfavorably as to their honey-gathering qualities, but I am in a position to assert as a fact that these bees, by the side of Syrians and Ligurians, have given more bees and more honey than any. Those who have not found it so should not discard the whole race, but try again, and see what other queens will do, and then breed from the best, just as they profess to have done with Italians.

Two other good points are possessed by both Carniolans and Cyprians. They are not given to robbing; and in making up nuclei with these bees, they will almost invariably stay where placed.

In conclusion I would say that much is due to Mr. Benton, for placing before us more prominently these new varieties of bees. It would perhaps be too much to say that these bees will cause a revolution in our industry, but that the two most desirable kinds mentioned will soon be found superseding Italians in most apiaries, even where the former are now strongly opposed, I am fully persuaded as their marked superiority must bring them to the front.

Rottingdean, England.

For the American Bee Journal.

The Honey-Producers' Association.

J. V. CALDWELL, (125–208).

The idea of an association to control the price of our honey crop has impressed me very forcibly. First, is there anything tangible or practical in the idea? I say *no*, most emphatically. Honey is one of the products of the farm, and as such it must be placed on the market in precisely the same manner as any other product.

I am very sorry that our product has gone down in price, as it has this season. As I am depending upon my bees for a living, I am doubly interested, but I am satisfied that the result would have been different had the season been a poor one, instead of one of the best in my 14 years' experience. If we could all agree on a fixed price for our honey, and also agree to take no less under any circumstances, there might be some encouragement to form such an association. But there are, in my opinion, at least the two following serious objections:

1. Most bee-keepers, when their product is ready for the market, want the money for it, or its equivalent. Now, suppose the crop has been a good one, as is the case here this season, and, for instance, the price of good comb honey is placed at 20 cents per pound, and the market price is only 10 cents. What is to be done? The producer cannot hold over his honey until another year, as can the wheat and corn raiser, but he must sell. But it may be said that the price will not go to such a low figure, if it were not for the small bee-keepers, who, not making a business of bee-culture, care but little about the price they secure for their few hundred pounds.

2. What are we going to do with these farmers and small producers? They will sell, and at a low price very often, and it seems to me that we could not induce them to join any such organization as the proposed one; and, granting this to be the facts in the case, just as soon as they saw the price of honey fixed at a higher figure, they would have an inducement to produce more honey, and thus crowd an already overstocked market; thus making matters worse than they are at present.

It is my candid opinion that there is but one practical method of accomplishing the desired end, and that is for a few rich apiarists to form a "corner," and each season buy all the honey produced in the United States and Canada; but where, oh, where, is the Gould or Vanderbilt among us? If any of our fraternity can suggest a more practical plan, by all means let us have it.

Cambridge, Ills.

For the American Bee Journal.

How Bees Exercise, Hibernation, etc.

DR. G. L. TINKER.

On page 746, Mr. Demaree presents a very able article upon the above subject, and it is one upon which we certainly require more light. To make up the issue fairly and squarely, Mr. D. denies that bees ever resort to "exercise" to raise the temperature when subjected to severe cold. No subject pertaining to wintering has a greater practical bearing than this one of exercise. We need a thorough understanding of the conditions that compel bees to exercise, and which is the forerunner of all our great disasters in wintering, and of those other conditions that secure hibernation, in which all the energies of the bees are conserved in the highest degree in their long winter confinement.

I affirm that bees do exercise when subjected to low temperature, but it is not perhaps the kind of exercise that Mr. Demaree has had in view. It is certain that they never drum with their wings or "kick up their heels," or get on a "tear," but when they wish to "warm up" to a state of activity from a state of hibernation, they simply begin a *forced respiration*—the opposing force coming from the effect of a low temperature. As they warm up the respirations are accelerated until a temperature in the cluster is reached that enables ordinary activity. No other movements are ever observable until a very rapid respiration is acquired, when they begin to move about as we always see bees in the working season—never at rest.

I have viewed the actions of bees at low temperatures a great many times, and have found that although there was the "oppressive stillness" to which Mr. D. alludes, yet the bees could be seen moving about constantly. Their short, quick respirations could also be seen. Now a continuation of this state of activity of bees subjected to severe cold is all that is necessary to develop a typical case of diarrhea. The state, moreover, in no wise differs, as above intimated, from that seen in summer time. They are simply active, and the whole colony in a condition to take food at all times. Of necessity they do eat, and, as we know from the great loss of weight of unprotected colonies, they eat largely. I have had colonies in single-walled hives to lose 30 pounds of weight in winter before any breeding to speak off took place, the bees dying off until only a pint or so were left by April 1. Unavoidably they had diarrhea, and they spring dwindled. On the contrary, I have found where bees are subjected to proper temperatures in wintering that they hibernate most of the time, consume very little food, lose few bees, and come out in the spring vigorous and healthy colonies.

Mr. Demaree makes a strong point when he says, "that bees feed regularly when closely confined in the cluster in extreme cold weather, like they do in the season of their activity, is a supposition only—it has never been proved that they do." Allusion was made to this matter in the October issue of the *Apiculturist*, and I will now further explain that intervals of several days elapse between "feeding times," when bees are hibernating. The intervals are passed in a state of profound rest that is a true hibernation (I beg the indulgence of Prof. Cook) "in the 'scientific' and ordinary meaning of the term," as Mr. Demaree lucidly remarks.

The "feeding times" last two or three hours, when they assume the hibernal state again, and are as composed as the other colonies near them. I have never seen sluggish bees partaking of food in the hive, and it seems certain that they are incapable of feeding in the torpid state. The popular notion that bees eat regularly in winter confinement is based upon the known fact that they require food. There is no other reason for the notion. It has been said that the bees near the honey take it up and pass it along the line to the hungry ones, and that the sluggish ones on the outside of the cluster are all the while crawling into the centre to get warm! But nothing could be further from the truth. The sluggish bees remain on the outside of the cluster until the colony warms up to feed, and if they are too far away from the edge of the cluster to get warmed up, they invariably die. Each bee helps itself to food, and none is passed from one to the other that I have been able to detect. Yet it is quite possible that they do feed each other as they ordinarily do when in the active state; but nothing can be more certain than that they do not eat at all during the intervals of torpidity.

Hibernating bees assume a compact cluster, and to the unaided eye appear the same as a cluster that has starved to death, such is the profound inactivity. Single bees can be seen in the same position for 24 hours at a time, and no doubt for days together. If we take out a comb on which the bees are clustered, we find them sticking together so closely and firmly that it is with fears that their limbs will be torn asunder in the operation. At first they have little movement, although aware of the disturbance, and appear benumbed and act like other hibernating insects as they begin to succumb to the effects of cold. Isolated bees become helpless, but the united cluster is capable of warming up and becoming active very soon. The question, therefore, arises, if all hibernating insects would congregate in clusters as do bees on non-conducting surfaces like the wax of honey-comb, would they not act much the same as bees under like circumstances?

Those who assume "to know" that bees never hibernate, must admit that their actions are very peculiar when subjected to cold; that no warm-blooded creature in existence in the state of "quietude" ceases all perceptible respiration and movement for days together. I therefore assert that the terms "quietude," "reduced activity," "quiescence," etc., are quite inadequate to express the state that bees enter in winter confinement under proper conditions. It seems to me that the term "hibernation" expresses the state exactly, and is the proper one to use, although the hibernation of bees is a limited one of periods, probably not exceeding ten or twelve days at a time.

New Philadelphia,○+ O.

For the American Bee Journal.

Cedar Valley, Iowa, Convention.

The Cedar Valley Bee-Keepers' Association met at Vinton, Iowa, on Dec. 7, 1886, at 1:30 p.m., President C. P. Hunt in the chair. Hon. D. E. Vorris, Mayor of Vinton, gave the address of welcome, which was responded to by President Hunt, and the Mayor made an honorary member.

The report of the Secretary was read and approved, and after the routine of business, the question-box was opened, some of the questions being answered as follows:

Which is the most practicable, cheapest and safest plan of wintering bees in this latitude? D. W. Thayer winters his bees in a cave, stoned up and covered with earth. It has double doors, ventilation pipe running in at the bottom, and a pipe running out at at the top. It was generally thought that wintering in the cellar was better than wintering on the summer stands. About 45° was considered the best temperature.

Are sound vegetable in the cellar a detriment to bees? All thought it best not to have any kind of vegetables in a cellar where bees are kept.

What is the best method of getting the most comb honey, and the least increase? Keep queen-cells cut out and give plenty of room to work.

What are the wintering qualities of honey-dew? It was thought that it is not fit to winter bees on, although Mr. Robt. Quinn had wintered his bees on honey-dew with success, but prefers good clover honey.

To move bees a distance of seven miles, when would be the best time? In the spring, about May 1, if the weather is nice.

Which is the better place for an apiary, a slope to the south with artificial shade, or an orchard sloping to the north? The south slope was preferred.

After some discussion on marketing honey, A. J. Norris, H. O. McElhany and R. Quinn were appointed a committee to report next day on the desirability of forming an association for marketing honey and obtaining supplies.

Adjourned to 9 a.m.

The President called the meeting to order at 9:30 a.m. The committee reported in favor of forming an association. The report as well as the following were adopted:

Resolved, That a committee of five be elected, whose duty it shall be at their earliest convenience to draft constitution and by-laws, and perfect the organization of "The Cedar Valley Bee-Keepers' Produce and Supply Union," and submit, by correspondence, the result of their deliberation. They shall also be authorized to incorporate, if they think best, to secure members, elect officers and an agent, and to call a meeting of the members at such a time as they deem necessary for the best interest of all.

The following were elected as the committee: C. P. Hunt, of Waterloo; A. J. Norris, of Cedar Falls; H. E. Hubbard, of La Porte City; G. W. Harbin, of Waterloo, and Henry Miller, of Vinton; the committee to meet at Waterloo, on Dec. 28, 1886, and select two more to act on the committee.

All persons interested in forming this association are requested to correspond with the Secretary of the association, who will forward all necessary information.

H. E. HUBBARD, *Sec.*

La Porte City,⊙ Iowa.

Local Convention Directory.

1887. *Time and place of Meeting.*

Jan. 8.—Hardin County, at Eldora, Iowa.
J. W. Buchanan, Sec., Eldora, Iowa.

Jan. 11-13.—N.Y.State, E.N.Y., &c., at Albany, N.Y.
Jno. Aspinwall, Sec., Barrytown, N. Y.

Jan. 12.—Cortland Union, at Cortland, N. Y.
D. F. Shattuck, Sec., Homer, N. Y.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

Jan. 13.—Vermont, at Burlington, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Jan. 13.—Sheboygan County, at Hingham, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Jan. 18.—N. W. Ills. & S. W. Wis., at Rockford, Ills.
J. Stewart, Sec., Rock City, Ills.

Jan. 19, 20.—N. E. Ohio, N. Pa., &c., at Andover, O.
M. E. Mason, Sec., Andover, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Cold Wave in New York.—Ira Barber, De Kalb Junction, ♂ N. Y., on Dec. 6, 1886, writes:

A cold wave is hovering over this locality, and for the past four days the mercury has been from 1° to 24° below zero, and still holds its grip. In my bee-cellar the temperature was at 46° above zero yesterday, while outside it was at 22° below zero. I would much prefer to have the temperature 10° higher in a cellar as damp as mine is, at this stage of winter. Our honey crop was a perfect failure, and the number of colonies of bees in northern New York will be greatly reduced for another season.

Good Season for Bees.—F. A. Snell, Milledgeville, ⊸ Ills., on Dec. 7, 1886, says:

The past season has been a good one here. I commenced on June 1 with 85 colonies; I now have 140 all in winter quarters, and in good condition. My surplus honey crop was 5,000 pounds of comb honey and 8,000 pounds of extracted.

Winter Convention in Chicago.—James Heddon, Dowagiac, ♀ Mich., writes:

I have read Mr. Baldridge's article discussing the feasibility of holding an American Bee-Keepers' Convention in Chicago, for the purpose of organizing and taking measures for protection against the ruinously and needless steady decline in prices for honey. It seems to me that an organization of the right kind may, as Mr. Baldridge says, effect much in the direction of our interests and rights. Mr. Baldridge has well said many things that I have often thought. Looking to our mutual rights and interests as honey producers, I am in favor of such a convention, and know of no better time to hold it than this winter; and if we could hold it as soon as New Years, could we not have the benefit of half fare over nearly all the railroads going into Chicago? I believe a convention of this kind will benefit us more than all other conventions we have held for years. All American bee-keepers, whether present or not, will be in full sympathy with us. Health permitting, I will promise to wave all other business and attend; bearing my share of the expenses, and doing my part of the good work.

Good Report.—J. V. Caldwell, (125-208), Cambridge, ⊸ Ills., on Dec. 8, 1886, gives the following report for 1886:

On May 1, 1886, I had 125 colonies of bees in fair condition. They increased by natural swarming to 208 colonies, and gave me 13,000 pounds of comb honey, all in one and two pound sections.

Hardin, Co., Iowa, Convention.—J. W. Buchanan, Eldora, ⊙ Iowa, Secretary of the Convention, writes:

The bee-keepers of Hardin county, Iowa, met in Eldora, on Monday, Dec. 6, 1886, and organized the "Hardin County Bee-Keepers' Association," with Mr. John Ely, President. The next meeting will be held on Jan. 8, 1887, at Eldora. All interested in bee-keeping are cordially invited to attend.

Managing the Sale of Honey.—Henry W. Haag, Pettit, +o·Ind., on Dec. 6, 1886, writes:

The season this year has gone and the winter has come, and it was a good honey season in this locality. I have 24 colonies in winter quarters, which are in fine condition. I winter my bees in a cellar, and I was very successful last winter, and I hope to be the same the coming winter. I have been thinking of the same points as mentioned by Mr. L. N. Tongue, on page 762. There ought to be something done to protect bee-men that make bee-keeping a specialty, as there are those in this part of the State that sell their honey for little or nothing, and when we bring our honey to market, the grocer says that he can buy all the honey he wants for from 9 to 10 cents per pound; but I say that the times will become harder before I will sell for such prices. I think it would be a good plan for the honey-producer to make the price instead of the grocer doing it. Now let us stick together and see how it will work.

Non-Swarming Hives—Disturbing Bees.—M. M. Baldridge, St. Charles, ♂ Ills., writes:

Some one on page 776 has found a "non-swarming hive," that, if managed for surplus, as all good bee-keepers should manage, will produce, each season, from "200 to 300 pounds of honey, and without any increase." I suppose we could be sure of that much honey by using that hive, whether the flowers yield honey or not. This would be better, perhaps, than what Mrs. Cotton guarantees! What a pity it is that I did not have such a hive in 1880, when I did not get enough surplus honey from nearly 200 colonies to give me and my family one good square meal! The foregoing statement seems to be in harmony with another, in the same article, which reads thus: "The brood-chamber should never be disturbed after the season for honey-gathering has commenced, if bees are expected to gather a large surplus." Now, my experience taught me many years ago, and still teaches me that, if you wish to secure a large yield of surplus honey, a proper and frequent disturbance of the brood-chamber will secure just that result—provided, of course, there is plenty of honey in the flowers, etc.

Opposed to Legislation for Bee-Men.—R. Gammon, Rockton, ♂ Ills., writes:

In reply to Dr. Miller's request about legislation for bee-keepers, I will say that I think we have seen too much class legislation in the last 25 years, in favor of banks and railroads, and I for one would not want to see it for bee-keepers; as it seems to me it interferes with our free government.

The Market Reports.—O. B. Barrows, Marshalltown, ⊙ Iowa, says:

The editor asks "all the rest of his readers" to tell what they think about Mr. Baldridge's proposition to exclude the market reports from the bee-papers. If two editions were published to accommodate both factions, I think I had rather have the one containing the market reports.

Moisture in Hives.—John Rey, East Saginaw, ⊙ Mich., on Dec. 10, 1886, says:

My bees are having a fine flight to-day; the weather is fine, just right for bees. There is no diarrhea among them yet. They are in a healthy condition, and I notice that the bees of those hives that have some water or moisture running from them, carry it out and spit it out in a fine spray, and it is nothing but clear water. I think that is the way bees get rid of the water or moisture in the hives when they get a chance to fly.

Results of the Season.—Mexico Sperry, La Harpe, ⊸ Ills., on Dec. 2, 1886, says:

I have been taking the American Bee Journal for three years, to which I attribute most of my success. Last winter, out of 23 colonies, I did not lose one. I took 6 more on shares, and I have had 22 swarms and sold 15 colonies, and I now have 51 colonies left for winter. I prepare my bees for winter as do Messrs. Dadant &

Son. I have taken 1,900 pounds of extracted honey, and about 1,800 pounds of comb honey in two-pound sections. I am very well satisfied with the honey crop this year, but I had to sell it cheap—extracted honey for from 5 to 7 cents per pound, and comb honey for from 10 to 15 cents per pound—on account of a neighbor bee-keeper who sold his honey for 5 to 10 cents per pound. I prepare my bees in October for winter, and I find it the best. I think that every bee-keeper ought to take the BEE JOURNAL. I would not do without the BEE JOURNAL for anything.

Good Fall for Honey.—E. W. Powers, Palmyra,♂ Tenn., on Dec. 4, 1886, writes:

I have 28 colonies of bees, all of which are in good condition for winter, with from 25 to 50 pounds of honey each. This has been the best fall for honey that we have had for 2 or 3 years. This locality is a very good one for an apiary I think, as we have a few of the many resources of honey, which consists of white clover, buckwheat, linden and poplar; the last yielding the greatest quantity, but continues only about twenty days. My bees work on buckwheat but very little; why it is I do not know, unless they find something better.

A Little Tennesseean's Report.—Master Charlie H. Austin, of Johnson City,♂ Tenn., on Nov. 30, 1886, wrote us the following:

I thought that I would write to you (as my papa is taking the BEE JOURNAL, and has not time to write for it), and tell you how our little Italians are getting along in Tennessee. We have 15 colonies; papa does the work, and I do the smoking. Our bees are in good condition for winter. We sold all of our spring honey in one-pound sections for 20 cents a pound. I am a a little boy just 10 years old.

Reports of the Market.—J. O. Shearman, New Richmond,♀ Mich., on Dec. 12, 1886, says:

On page 771 the editor asks all to answer the question about excluding the market reports of commission men. They are generally the first thing that I read; I would sooner exclude any other part of the paper. Those reports benefit the BEE JOURNAL as much as they do the commission men.

Keeping up the Price of Honey.—E. T. Flanagan, Belleville,♀ Ill., says:

I have talked to several bee-keepers in regard to Mr. Baldridge's article on page 774, and all say that he has struck the key-note. We must organize, we must put up and keep up the price of honey or quit the business. All agree that a convention at Chicago, *very soon*, would be a proper step in the right direction; and all were unanimous in regard to the commission men in large cities. Do not allow them the columns of the bee-papers, even if they pay for their space as advertisers, as they have greatly injured the bee-business. Appoint some one in every centre to buy up the honey of the small bee-keepers that spoil the trade. I, for one, believe that a call for a convention would be responded to from all over the United States. But I may be too sanguine.

Securing Lower Freight Rates.—Henry L. Rouse, Ionia,♂ Iowa, writes:

As I wish to join the Bee-Keepers' Union I send the $1.25. I am of the opinion that if bee-keepers would organize it would benefit them not only in holding the price of honey, but also in securing lower rates of freight. When it costs 50 cents per 100 pounds to ship honey from Iowa to Chicago, and only 80 cents per 100 pounds to ship from San Francisco, Calif., to Philadelphia, Pa., something is wrong somewhere. We (the bee-keepers) should endeavor to establish a lower rate of freight by some means or other. I should like to see the matter agitated a little anyway.

Labeling Honey, etc.—Charlie W. Bradish, Glendale,♂ N. Y., on Dec. 7, 1886, says:

At this date, when the mercury is below zero, my 140 colonies of bees are packed in the cellar in good condition. The past one has been a good season for honey, but not for increase. I have sold over 4,000 pounds of honey in this county, and I can sell all I have left at 10 cents per pound for extracted, and 12½ cents per pound for comb honey. I label my honey, and I find that it pays to do so.

Convention Notices.

☞ The next annual convention of the Cortland Union Bee Keepers' Association will be held in Union Hall, at Cortland, N. Y., on Jan. 12, 1887.
D. F. SHATTUCK, *Sec.*

☞ The eleventh annual meeting of the N. W. Ills. & S. W. Wis. Bee-Keepers' Association will be held in the Grand Army Hall in Rockford, Ills., on the third Tuesday in January, 1887. There will be a two days' session. J. STEWART, *Sec.*

☞ The Northeastern Ohio, Northern Pa. and Western New York Bee-Keepers' Association will hold its 8th annual convention in Chapman's Opera House, at Andover, O., on Wednesday and Thursday, Jan. 19 and 20, 1887. First-class hotel accommodations are offered at $1 per day to those attending the convention. A general invitation is extended to all. M. E. MASON, *Sec.*

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 11, 12 and 13, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised.
GEO. H. KNICKERBOCKER *Sec.* N. Y. State.
JOHN ASPINWALL, *Sec.* Eastern N. Y.
F. E. JOHNSON, *Sec.* N. J. & Eastern.

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887, at Red Ribbon Hall, commencing at 1:30 p.m. and continuing for 3 days. E. Kretchmer, of Coburg, Iowa, will deliver an address on Modern Apiculture. E. M. Hayhurst, of Kansas City, and many others from abroad are expected. Members can return on one-third fare over the B. & M., U. P. and M. P. lines, by securing a certificate of payment of fare to Lincoln, from the agent of their station. In order to secure the reduced rates on return trip members holding such certificates must present them to the Secretary of the Bee-Keepers' Association for endorsement.
H. N. PATTERSON, *Sec.*

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Market is well supplied with all the grades, and the demand is light. Prices are nominal at 11@12c. for white in 1-lb. sections. Fancy white in scant pound sections, 13c. Very little extracted is being sold, and prices range from 4@7c.
BEESWAX,—22c. R. A. BURNETT,
Dec. 8. 161 South Water St.

NEW YORK.

HONEY.—In consequence of a large stock of comb honey on this market, fancy prices cannot be maintained. Fancy white honey in paper boxes, or glassed, are in better favor here than the unglassed honey, hence the difference in the price. We quote present prices as follows: Fancy white in 1-lb. paper boxes, or glassed, 13c.; same unglassed, 12c., and in 2-lb. glassed sections, 10@11c.; off grades 1 to 2 cts. per lb less. Calif. comb, 8@10c.; fancy buckwheat 1-lbs., 8½@9c., and 2-lbs. 7½@8c. Extracted white clover, none in the market. Calif. ext'd, 60-lb. cans, 5@6c.; buckwheat, in kegs and barrels, 4@5c.
BEESWAX.—21@23c.
MCCAUL & HILDRETH BROS.,
Dec. 7. 34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c. Extracted, 6@7c.
BEESWAX.—25 cts. per lb.
Dec. 7. BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—The market is a trifle more active. Best white comb honey in 1-lb. sections, 11@12½c. Buckweat, 10c. Extracted, 7@9c.
BEESWAX.—23c.
Dec. 13. M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—There is a lively demand for table honey in square glass jars, and the demand for nice comb honey is very good. Demand from manufacturers is slow for dark grades of extracted honey. The ranging prices for extracted is 3@7c. a lb. Nice comb brings 12@15c. per lb. in a jobbing way.
BEESWAX.—Home demand is good. We pay 20@23c. per lb.
Nov. 10. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—The market is not very active and prices a little lower. Choice 1-lb. sections of best white sell at 13@14c.; second grade 1-lbs., 10@12c.; choice white 2-lbs., 11@12c. Extracted, slow at 6c.
BEESWAX.—Scarce at 25c.
Nov. 17. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The demand for honey is only moderate and the supply ample, of very fine quality and in extra good order. We quote choice 1-lb. sections of white at 12@13c.; 2-lbs., 11@12c.; dark not wanted. Extracted, white, in barrels, half-barrels and in kegs, 6@6½c.; in tin packages, 6½@7c.; dark, in barrels and ½-barrels, 5@6c.
BEESWAX.—Nominal at 25c.
Dec. 13. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The market has been rather duller the last week, but prices are well maintained, particularly for choice white extracted and choice white comb honey, as both kinds are not freely offered. We quote: 3½@4¼c. for extracted, and 9@12c. for comb; with easier sales for the best grades, than for the darker honey, as none seem to be able to use the dark just now.
BEESWAX.—Dull at 19@22c.
Dec. 11. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.
BEESWAX.—20@23c.
Oct. 18. O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11¾@12¼c.; latter price is for choice white clover. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4½@5½.; in cans 6@7c. Market dull.
BEESWAX.—Dull at 20c. for prime.
Nov. 17. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand is good for all grades, and receipts have been very large of comb and extracted. Home bee-men have kept out of the market until this month; having glassed every lb. section on both sides they are reducing prices, selling 60 lbs. of glass with 160 lbs. of honey, making our market lower. There crop is about 70,000 pounds. We quote: White clover 1-lbs., 12@13c.; 2-lbs., 11c; ½-lbs., 13@14c.; dark 1-lbs., 10c.; 2-lbs., 8@9c.—California 2-lbs., 9@11c. Extracted white clover, 6c.; dark, 4@5c.; white sage Calif., 5½c.; amber, 5c.
BEESWAX.—22c.
Nov. 20. CLEMONS, CLOON & CO., cor. 4th & Walnut.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

Issued every Wednesday by
THOMAS G. NEWMAN & SON,
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923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

◆

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so *cheap* that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us three subscriptions—with $3.00—direct to this office. It **will pay** any one to devote a few hours, to get subscribers.

◆

The Report of the Indianapolis Convention is now published in pamphlet form, uniform with that of last year. It will be sent postpaid for 25 cents to any address.

We have also bound it up with last year's, together with the History of the Society; this we will mail for 40 cents. Or if you send us one *new* subscriber (with one dollar) besides your own renewal, we will present you with a copy by mail.

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Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year? When you do so, please select any 25 cent book in our list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887,—will you not assist us to obtain them?

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The American Bee Journal	1 00	
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Canadian Bee Journal	2 00	1 75
Rays of Light	1 50	1 35
The 7 above-named papers	5 25	4 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

◆

Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers for 1887.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

◆

New Subscribers are coming in rapidly—for this our thanks are tendered to the friends of the AMERICAN BEE JOURNAL, who are exerting their influence in its behalf. We should thribble our list at the present low rate of *one dollar a year.* We hope every one of our present subscribers will send at least one additional subscriber with the renewal for 1887.

◆

We refer our Subscribers to our offers of premiums and net club rates for new subscribers, and if they will send us one or more subscriptions from among their neighbors who are interested in bees, they will get the premiums or Cash reductions as they may indicate—to pay for their trouble; and at the same time they will be enhancing the usefulness of the JOURNAL and contributing toward its prosperity.

◆

Preserve your Papers for reference. If you have no **BINDER** we will mail you one for 60 cents, or you can have one FREE if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

More Premiums.—Mr. L. J. Diehl, of Butler, Ind., offers a colony of Italian bees as a present to the person sending to this office the largest club of subscribers for 1887. The subscriptions may be sent in at any time before the first of May at our regular club rates, and additions made as desired, but it must be stated that you are working for that premium, so that we can keep account of the subscriptions.

As a premium to the second largest club we will send my mail, postpaid, a copy of the "Farm Account Book," worth $3. The postage is 20 cents.

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

◆

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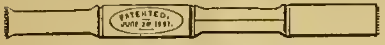

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WHILE attending the North American Bee-Keepers' Convention at Indianapolis, we learned there was a rumor afloat that the Patent on the ONE-PIECE SECTION had been set aside—circulated by unprincipled parties, to mislead bee-keepers. We would say in regard to this, that such is not the case. It is now before the U. S. Supreme Court, at Washington, and will probably be decided before a great while, when we will notify all through the Bee Journal. Until then pay no attention to rumors.

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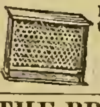

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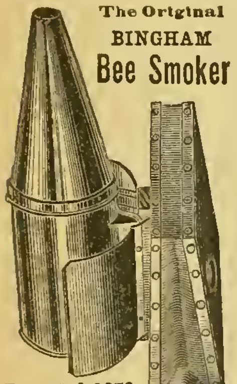

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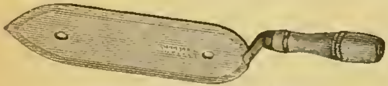

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Extra smoker (wide shield)	2 "	1 25
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Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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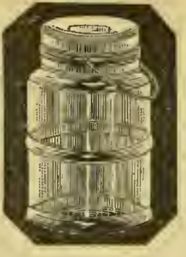

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To hold 1 pound of honey, per dozen, ...	**$1.60**
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All men seeking Health, Strength and Energy should avoid drugging the stomach and send for **Prof. MARSTON'S TREATISE,** which is published especially in the interests of those who are **Weak, Nervous and Debilitated.** If you have been drugged and humbugged send at once for this **FREE BOOK,** Replete with information of value to young and old men.

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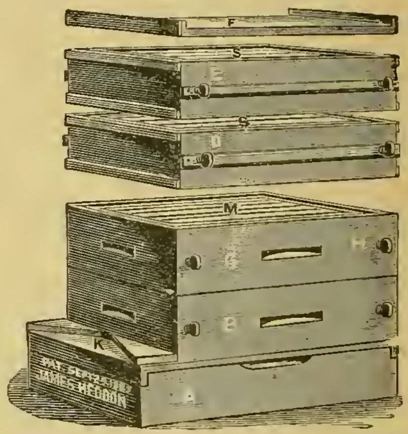
The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand; a slatted honey-board, and cover; two 6-inch brood-chambers, each containing 8 frames; two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, $4.00, complete.

It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.—In filling orders for these hives, in the flat, we make 6 different combinations, so that our customers may make a selection from the sample nailed hive, without waiting for us to quote prices, and the different kinds will be known by the following numbers:

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames, and the slatted honey-board. Price, **$1.55** each.

No. 2 is the same as No. 1, with the addition of one surplus story containing 28 sections without separators—interchangeable, but not reversible.—Price, **$2.00** each.

No. 3 is the same as No. 2, with *two* surplus stories as therein described. Price, **$2.50** each.

No. 4 is the same as No. 1, with the addition of one surplus story containing 28 sections in wide frames with separators, which can be reversed, inverted, and interchanged, the same as the brood-chambers. Price, **$2.30** each.

No. 5 is the same as No. 4, with *two* surplus arrangements as therein described. Price, **$3.00.**

No. 6 contains all the parts as described in the sample nailed hive. Price, **$2.75** each.

Those desiring the hives *without* the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at ½ cent each, respectively.

We will also make the following deductions on quantities ordered all at one time: For 10 or more hives, 5 per cent. discount; for 25 or more hives 7 1-2 per cent.; for 50 or more, 10 per cent.

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AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Dec. 29, 1886. No. 52.

We Wish all our readers, both young and old, a prosperous and

"HAPPY NEW YEAR."

To all our Subscribers of the past year we return thanks for patronage, and earnestly hope that every one will remain with the Bee Journal family for another year at least.

Look Out for the usual annual crop of so-called new "bee-papers." They are usually offered for next to nothing, publish a few numbers, and then cease to exist—the few subscribers they may have obtained being left to mourn the loss of the few dimes paid for a year's subscription. That which is offered for next to nothing is usually worth nothing! It is best to subscribe for a reliable and well-established paper. You will then get the value of your money.

Every Day the business letters that come to this office are fully attended to and finally disposed of—none are left until the next day, except those in which the writer has omitted either name or Postoffice address. We endeavor to be prompt and accurate, and if our subscribers will practice the same virtues, more than half of the little annoyances that happen will be done away with.

We Keep this Notice standing all the year round: "Always give the name of the Postoffice to which your paper is addressed. Your name cannot be found on our list unless this is done," and yet many ask us to change their address without even mentioning to what Postoffice it has heretofore been sent. It often costs us more to find their old address than they pay for the Bee Journal for a year; as we may have to examine our subscription lists in every State, Province and Territory in North America. Please be more careful in the future, and never omit your name, Postoffice, county and State.

Another Volume is, to-day, closed! Another monument is reared to our favorite pursuit! Another valuable "book of reference" on progressive apiculture is created! Another mile-stone in the onward path of life is reached!

The American Bee Journal to-day enjoys a reputation and influence second to none in the world of apiculture! Its weekly visits to thousands of homes all over the world is greeted with an enthusiastic *welcome!* Its apicultural instruction and record of improved methods in our pursuit have been as anxiously looked for as they have been essentially adopted by apiarists not only in every State, Territory, and Province in North America—but also in Australia, Europe, Asia, and Africa!

It is quite unnnecessary to state that we shall in the future, as in the past, endeavor to "keep abreast of the times," and place before our readers all the new things in our ever-advancing pursuit, as soon as they come to light. The record, character, power and usefulness of the American Bee Journal in the past is its *guarantee* for the future. It will further the interests of honey-producers by losing no opportunity to create a demand for this product, both at home and abroad—thus aiming to benefit the pursuit at large.

We respectfully ask for the future the same unwavering confidence and support which the present editor has enjoyed for the past 13 years. In order to be of the greatest advantage to our pursuit, we must have the largest constituency of wide-awake, progressive apiarists, and we request that if our patrons think we have labored for their interest in the past, that they will give us "the vote of confidence" in the shape of continued exertions for the prosperity of the American Bee Journal. Urge your neighbors, who keeps bees, to subscribe for a periodical that advocates their interests, supports their cause, and defends their pursuit.

The Science of Spelling is the subject of a Bill submitted to the Committee on Education of the House of Representatives, at Washington, D. C., by Maj. Chas. A. Story, of Chicago. Mr. Story desires that this new system be thoroughly "tested and tried" by governmental aid, and then, if it be found as efficient and successful as its author claims, that it shall be adopted, and introduced into our common schools. It is claimed that by its use two years can be saved in the education of children, the two years occurring between the ages of 12 and 14 years. The new system is endorsed by some 60 of the leading and well-known men of Chicago.

The principal feature of it is, that only the sounds of the language shall be represented, thus doing away with all silent letters in spelling. No one of intelligence will say that something like the proposed improvement in our language is not needed, and we will venture the assertion that should the recommendation be adopted, all will hail it with a welcome becoming the progressive spirit of our times.

One Dollar invested for the weekly visits of the American Bee Journal for 1887, will richly repay every apiarist in America.

As Bread is the Staff of Life, so is judicious advertising the staff of business! You may as reasonably expect one "good square meal" to suffice for three months, as to expect one advertisement to bring in business for that length of time! Many persons cannot remember anything longer than about seven days. To stop advertising in a dull season, is like tearing out a dam because the water is low—either plan can but result in disaster.

Enterprising queen-breeders and supply-dealers know the value of advertising "all the year round." Presistently keeping their name and business continuously before buyers, will eventually place them on the successful side, if they have a valuable article to sell.

A "sign" is a mute invitation to those who may pass a man's place of business; a "circular" will only reach the one to whom it is personally addressed; but an "advertisement" in a well-conducted and widely-circulated paper (like the American Bee Journal) has an influence "far and wide;" it finds customers and almost compels them to consider the claims of the wide-awake advertiser. To yearly advertisers the American Bee Journal offers special inducements. This is just the time to make a contract for the year 1887.

We Ask every subscriber to promptly renew his subscription and at the same time induce a neighbor to take it, by convincing him that it is *for his interest* to do so. By inducing your bee-keeping neighbor to take the Bee Journal for 1887, you will be doing yourself a duty, because he may thus be educated so as not to ruin your market for honey by selling his at a ruinous price, for lack of knowing its *real* worth. This matter of marketing honey will be fully discussed in these columns during the next two or three months, and no one interested in honey-production can afford to do without its weekly visits.

Can you Use a Few Samples to advantage in getting up clubs—just send a postal card to this office for them, saying how many you desire, and we will cheerfully send them. A favorable word from our readers, who speak from experience, has more weight with their friends than anything we might say. Every one of our readers can lend us a helping hand, in this way, without much trouble, and at the same time help to scatter correct apicultural knowledge and promote the welfare of our pursuit.

We Point with Much Satisfaction to the Volume of the American Bee Journal for 1886, which closes with this number. It contains 832 pages, and is replete with full discussions of living topics. *One hundred and eighty* Queries have each been answered in the Query Department during the year by about a dozen different apiarists. A complete Index is presented this week not only to the subjects presented during the year, but also to the names of correspondents. The latter comprises nearly all of the best and most thoroughly successful apiarists of the present age. The Query Department each year presents to the readers instruction to the value of many dollars.

QUERIES

AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Ventilating Hives in the Cellar.

Query, No. 353.—What would be the best way to winter 75 colonies in a good, dry, warm cellar, with or without outside ventilation? The most of them have woolen blankets on top. Are they better than honey-boards?—N. S., Iowa.

With outside ventilation. The woolen blankets are good.—H. D. CUTTING.

Without outside ventilation. Use blankets. In using honey-boards I would put the thickness of a nail under the edges to allow ventilation.—C. W. DAYTON.

I do not know positively that ventilation is important. I do not think it harmful. I do not know that the blankets are better or worse than a board. I have tried both.—W. Z. HUTCHINSON.

If the temperature can be kept from 43° to 47°, the ventilation part makes little difference, as I have proven by closing all ventilators for a month at a time. I should prefer the woolen blankets to the honey-boards.—G. M. DOOLITTLE.

They must have a fair amount of ventilation, but a cellar generally has enough. Blankets are better than honey-boards.—DADANT & SON.

I much prefer to have outside ventilation, that is, to have the cellar well ventilated. If the honey-boards are open I should prefer the woolen.—C. C. MILLER.

Just keep the temperature from 40° Fahr. to 48°, and all will be well. I do not think that the covers matter. Keep the entrance well open. Were it no trouble I should like hives raised one or two inches from the bottom-boards. Because of the trouble, I have only raised a few each winter.—A. J. COOK.

I do not worry at all about ventilation. Personally, I am very sensitive to carbonic gas, and I have stepped into a bee-repository that was almost completely full of hives containing bees, and had been tightly closed for weeks, and the bees were still and in excellent condition, and the air breathed as if fresh from the heavens. Blankets are as good as boards, if the room is warm enough.—JAMES HEDDON.

My cellar is large, but has no ventilation, and hence there are no drafts of air to interrupt the hibernating state. The air seems to be good all the time. If there was a bad odor in the cellar I would open the hatchway every night when the temperature outside was the same or above that in the cellar. The woolen blankets on top are good, but I think no better than my thin, unpainted "under covers."—G. L. TINKER.

Width of Brood-Frames.

Query, No. 354.—What is the right width of frames for brood, or to use in producing extracted honey? Some say ⅞ of an inch; some, just one inch; and still others, 1⅛ inches, for all purposes. Which is right?—W.

My preference is for the ⅞.—W. Z. HUTCHINSON.

I prefer ⅞, for all purposes.—H. D. CUTTING.

I prefer 1 inch, the medium width.—C. W. DAYTON.

I use 1 inch for all except the bottom-bar, that being ½ inch.—G. M. DOOLITTLE.

Any of those sizes will do. But be uniform if only for the sake of looks.—DADANT & SON.

The top-bars of my brood-frames are just one inch wide. I doubt if I could have a better width, although I never have tried anything else.—C. C. MILLER.

The distance from the centre of one frame to the centre of the other should be 1 7-16 inches. If the frames have narrow top-bars like the Langstroth, I prefer the ⅞ of an inch wide. If close fitting ends, 1 7-16 inches wide.—J. P. H. BROWN.

I prefer ⅞ of an inch. If we desire long or deep cells we can place the frames a little further apart. Seven-eighths is the best for all purposes, and the same frame may be used for brood or for honey.—A. J. COOK.

I use, and most firmly and fully believe the frame should be, the width of the thickness of the comb, viz: ⅞ of an inch. By using frames of this width, spacing can be made as close or open as is desired, or desirable.—J. E. POND, JR.

So far as the amount of honey gathered by the bees is concerned, the width of the frame cuts no figure, so far as I have experimented in this direction. But I prefer the ⅞-inch top-bar for several practical reasons, chief among which are these: The narrowness of the top-bars gives a ready view of the tops of the combs when I want to see how the bees are getting on. They are more readily moved in the hive. They can be uncapped more quickly when extracting, as the wood is not in the way of the knife, as is the case when broader frames are used.—G. W. DEMAREE.

After making very many experiments I prefer ⅞ of an inch all around, except for my new hive, wherein I make the top and bottom bars 1-16 of an inch narrower, to better enable me to carry out the "shake-out" function. I would not advise any change in frames for extracting. I have tried this, too. Let all be alike, and interchangeable.—JAMES HEDDON.

My experience is that one inch is the right width for brood-frames or for extracting frames. If the frames are ⅞ of an inch or less, brace-combs will give more trouble, and the top-bars be more apt to sag. If more than one inch wide, the frames are difficult to handle, and if the frames are spaced only 1⅜ inches from centre to centre, as they should be, the space for the bees to come up will be too narrow.—G. L. TINKER.

Round Perforations in Zinc.

Query, No. 355.—What would be the right size or diameter of round holes in a zinc honey-board that would exclude the queen, and also dislodge the pollen from the workers' legs, to keep the pollen out of the surplus arrangement?—Ont.

Not having made accurate measurements, I should judge a round hole of about 7-32 of an inch in diameter would be nearly right.—J. P. H. BROWN.

It is practically impossible to construct the arrangement. Unless the pollen is very dry or carelessly put on the legs of the bees, it does not dislodge so readily. I can speak from experiment on this question.—C. W. DAYTON.

I do not know, and do not believe I care to know. I am afraid anything small enough to dislodge pollen would hinder the bees in working.—C. C. MILLER.

I do not know. If a bee can easily pass through a round hole 5-32 of an inch in diameter, that would be the size. I should have no use for such an arrangement.—W. Z. HUTCHINSON.

I do not think that such a honey-board can be made practical, for bees would not crowd through such small holes to work to advantage.—G. M. DOOLITTLE.

It would depend upon the size of the bees, some bees are considerably larger than others. Perhaps 5-32 of an inch would admit the body of the bee till she was *hung* on the balls of pollen; but I know by actual observation that any sort of perforations that are so small as to dislodge the pollen when the workers are passing through them, are seriously objectionable to the bees, and, I think, impracticable.—G. W. DEMAREE.

The right size is 11-64 of an inch. Beautiful comb honey in sections without a particle of bee-bread in them has been obtained between such boards in the centre of the brood-nest. In a slight flow of nectar if comb honey is wanted very badly, such a practice might be resorted to.—G. L. TINKER.

In my non-swarming attachment (described on page 21 of the BEE JOURNAL for 1884, and also in my book), I used round holes for excluding drones and queens. They measured scant 3-16 of an inch. They were seldom used by the bees when passing in, but always when passing out of the hive. Possibly your plan may work with the proper size of holes. Cut and try them. We have a profusion of pollen here, but no trouble about its going into the sections. All our honey-boards break joints, however.—JAMES HEDDON.

I would not advise round holes for the purpose, as any size that would allow a loaded bee, pollen and all to pass, would most certainly allow a queen to pass also. The holes should be longer than wide, and by being so made they will allow a worker to pass handily, where, if the hole were round, she could not possibly pass, if it was the same diameter as the width of the others.—J. E. POND, JR.

Convention Notices.

☞ The Annual Convention of the Vermont Bee-Keepers' Association will be held at the Van Ness House, Burlington, Vt., on January 13 and 14, 1887. R. H. HOLMES, *Sec.*, Shoreham, Vt.

☞ The next annual convention of the Cortland Union Bee Keepers' Association will be held in Union Hall, at Cortland, N. Y., on Jan. 12, 1887. D. F. SHATTUCK, *Sec.*

☞ The eleventh annual meeting of the N. W. Ills. & S. W. Wis. Bee-Keepers' Association will be held in the Grand Army Hall in Rockford, Ills., on the third Tuesday in January, 1887. There will be a two days' session. J. STEWART, *Sec.*

☞ The Northeastern Ohio, Northern Pa. and Western New York Bee-Keepers' Association will hold its 8th annual convention in Chapman's Opera House, at Andover, O., on Wednesday and Thursday, Jan. 19 and 20, 1887. First-class hotel accommodations are offered at $1 per day to those attending the convention. A general invitation is extended to all. M. E. MASON, *Sec.*

☞ The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 11, 12 and 13, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behooves every bee-keeper to attend. A grand exhibit of apiarian fixtures is promised.

GEO. H. KNICKERBOCKER, *Sec.* N. Y. State.
JOHN ASPINWALL, *Sec.* Eastern N. Y.
F. E. JOHNSON, *Sec.* N. J. & Eastern.

☞ The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887, at Red Ribbon Hall, commencing at 1:30 p.m. and continuing for 3 days. E. Kretchmer, of Coburg, Iowa, will deliver an address on Modern Apiculture. E. M. Hayhurst, of Kansas City, and many others from abroad are expected. Members can return on one-third fare over the B. & M., U. P. and M. P. lines, by securing a certificate of payment of fare to Lincoln, from the agent of their station. In order to secure the reduced rates on return trip members holding such certificates must present them to the Secretary of the Bee-Keepers' Association for endorsement. H. N. PATTERSON, *Sec.*

Premium Worth Having.—The New York *World* and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for $1.90. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

This "History" will be sent FREE by express at the subscriber's expense; or will be mailed for 10 cents extra to any place in the United States or Canada.

It is arranged chronologically by years, from 1492 to 1885. Every event is narrated in the order of its date. These are not confined, as in other works, to political matters, but embrace every branch of human action.

This premium is worth the whole of the money sent for both periodicals, and should induce thousands to subscribe, and thus get two unrivalled weeklies for nothing.

CORRESPONDENCE.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♁ north of the center; ♀ south; ⊸ east; ⟜ west; and this ♂ northeast; ⚲ northwest; ⊶ southeast; and ⚲ southwest of the center of the State mentioned.

For the American Bee Journal.

"A Year Among the Bees."

G. M. DOOLITTLE.

I have at last found time to carefully read Dr. Miller's book, "A Year Among the Bees," which I received sometime last March or April, if I recollect rightly; and I wish to say that I am glad the Doctor wrote the book in the style and way he did. It is as fascinating as a story or novel, and much more so to me, for after I had once begun I was crazy over it until I had finished. I saw in some bee-paper that the book lacked dignity. Perhaps it does, but I should never have known it, had I not been told. This reminds me of a lady in this place who says there are a few persons who call on her professing great friendship, but while there their eyes are going from one thing to another all over the rooms, criticising the way she keeps her house, and telling of it afterward, rather than coming to see her for her real worth. She said to me one day, "I had much rather they would stay away." I read the book for the good there was in it, and not for the dignity, for elegance in bee-keeping as a rule does not command a very high price.

One special reason why I am glad that the Doctor wrote the book in the way he did, is that it will take the conceit all out of the reader who expects to keep bees on the plan that "bees work for nothing and board themselves." The greatest trouble with most of those who enter the ranks of bee-keeping is, that they expect an easy time, in fact an easy time is what quite a share of the people of to-day are hoping for. Such is not calculated to the highest enjoyment of life. Even the hardship of working steadily with the bees during those hot days spoken of by the Doctor, wherein he "thoroughly wet with presperation" two changes of clothing a day, gives the keenest relish to a few minutes spent in the shade; while nothing to do but to sit in the shade makes the participant nothing but a chronic grumbler.

Then, such stings as made the Doctor "groan when no one was within hearing," must be borne with fortitude, for success in apiculture does not come without these. I do not suppose any *elegant* person, seeing me dance around as I frequently do from the pain caused by the stings I often get, would call it dignified, for 260 pounds dancing in a bee-yard at such times, does not always move gracefully; yet all this I willingly submit to for the pleasure the pursuit gives me. If any reader who perhaps has just commenced bee-keeping thinks he cannot endure such hardships, my advice would be for him to quit at once, before further money is lost in it; for I can give no assurance of success to such an one.

There are only two points which I wish to further notice at this time. Dr. Miller speaks of a single bee threatening and scolding him by the hour, and of having a colony or two so cross that a careless observer might say that the bees in the whole apiary were cross. This is the way it used to be with me, but of late years I am not troubled that way. Not that I think I have a more peaceable strain of bees, but I have taken a course with them which seems to be effectual in getting rid of these cross nuisances.

A few years ago myself or any other person could not step into the bee-yard without being quickly met by an angry bee; now strangers go all about the yard with me, and not an angry bee follows them. I was led to believe that the trouble all comes from letting that "scolding" bee follow me around. If I have a mishap at a hive so as to get the colony thoroughly angry, and a half dozen or more angry bees are allowed to follow me about, I find that those same bees are likely to keep that up as long as they live, whenever I come near the hive. Some five years ago I came to this conclusion, and I said if this was so, such bees might as well die first as last; so I made a paddle about 8 inches long and 5 inches wide, out of ¼ inch stuff, which I slipped into a leather loop at the back of the seat that I carried about the apiary to sit on. This was always handy, and whenever a bee was angry enough to follow me 3 rods from the hive, it was quickly killed by one blow of the paddle. In this way my apiary is now kept clear of this annoyance. Of course, I use all precaution possible in not getting the bees angry, and it often happens that I do not kill one such bee in a week. Again, I have to kill 10 or 12 within a minute when I have made an unlucky move at a hive.

The other item of which I wish to speak is, that since reading the book I am better satisfied with the plans and fixtures I have adopted than ever before. So many were saying a year or two ago that my plans of working with the bees were laborious, and my fixtures complicated; that I went to considerable expense to get sample surplus arrangements, etc., from many of our most successful honey-producers; but after thoroughly testing all of them, I did not see wherein, all things considered, I could gain anything along the line of bee-labor, by adopting them, and now I feel sure that Dr. Miller's plan of securing honey is not a whit ahead of mine. In fact, I think it requires more labor. He has three beside himself to work in the apiary, while I do all my work alone. Mrs. D. used to help me about the bee-yard, which lightened my cares much, as well as to be a great pleasure for us both; but since our tip-over some four or five years ago, she has all she can do to care for the house, on account of her lameness.

It is only through a thorough knowledge of the plans and work done by others that we can compare them with our own, and because Dr. Miller gives us that knowledge is why I like his book so well. I advise all to read it, especially beginners, for the knowledge gained regarding the managing of an apiary will be worth many times its cost.

Borodino,☉ N. Y.

For the American Bee Journal.

The Honey-Producers' Association.

M. M. BALDRIDGE.

I have read, with pleasure, the editorial on page 771, in regard to the Honey-Producers' Association. Many of the remarks therein were anticipated at the time, and, in fact, long before my article, on page 774, was written.

Yes, we must have a market report on honey in each and every number of our bee-papers, but such report should be the one agreed upon by the members of the association. This, of course, should be prepared, as the Editor indicates, by and through a committee selected by the association. And it would not surprise me at all if the association should be able to select a committee of honey-producers competent to attend to this matter! When such a committee fixes a scale of prices at which honey should be sold, by the members of the association, then each one should make it his or her business to adhere strictly to such prices in the sale of his or her honey. Unless the members do this they had better not join the association. In short, any member who refuses to be governed by the prices agreed upon by such committee, should be made to forfeit, *as a penalty*, his or her connection therewith.

The Editor refers to the "slip-shod, back-woods, go-as-you-please bee-men," who ruin the honey markets "by their lack of intelligence, and unbusiness-like methods." For myself I have no fears whatever of any harm or competition from that class of bee-men. In my experience, the real mischief-makers are such as are "up with the times" in the production of choice honey in modern packages. They are the ones who are running around from place to place, from village to village, and from city to city, and bragging about their big crops of honey at home, ranting about over-production, and wondering how they are going to dispose of them. They are the ones who are forcing the grocery-men, and everybody else, to take the "stuff" off their hands and at their own prices. And they are especially the ones that we would like to educate by having them join the producers' association, subscribe for the bee-papers, and be willing not only to drop their "unbusiness-like methods," but to secure a fair, honest and decent price for their honey. But if we cannot induce such mischief-makers to join the association, and work in harmony with its purposes, then we, who are or may be members, should do the next best thing. And what is that? Simply to keep a close watch of their movements, and when they attempt to sell their honey at a price that will harm the association, or demoralize the markets, just quietly *buy them out!* Then what? Simply keep our own honey out of sight until we can dispose of the would-be mischief-makers' crop at the prices fixed by the Association. By this means we will be able to sell their honey, as well as our own, *at a profit*, and this will speedily teach them that they had better become *one of us*, and thereby reap the benefits.

It will now be seen, I trust, that one of the chief purposes of the Honey-Producers' Association is to secure control of the mischief-maker's honey. There are enough honey-producers in Kane county, where the writer resides, who would, as members of a producers' association, be both able and willing to watch the mischief-makers in the county, to secure every pound of their honey in case they should attempt to place it upon the markets for less than that for which it should be sold. And I presume enough producers can be found in every county of the United States, who would be both able and willing to do the same thing. What has the reader to say on this point?

St. Charles,⛢ Ills.

For the American Bee Journal.

The Canadian Bee-Lawsuit.

WM. F. CLARKE.

For one, I entirely concur in the views expressed by the Advisory Board and Manager of the National Bee-Keepers' Union, in the Manager's report on page 761, as to championing the cause of Mr. Jos. Harrison. Only members of the Union have a right to expect its interposition on their behalf. Moreover, Canadian bee-keepers have not seen fit to join the Union in such numbers that they can reasonably consider themselves part of its constituency. And, still further, the Union is a national body. It is not, like the North American Bee-Keepers' Society, an international organization. This latter fact has, no doubt, had its influence in deterring Canadian bee-keepers from joining. I connected myself with it, not for my own personal benefit, but as an expression of sympathy with the fraternity in the United States, and an endorsement of the principle of combination for mutual defense. I do not think that Mr. Demaree, or any one else need "fear that our Canadian brethren will misconstrue our motive, if we refuse to come to the rescue."

But I do not understand Mr. Demaree's remark, that "the Union had better save its ammunition for larger game." The "game" is large enough in all conscience, for it involves the rights of 10,000 bee-keepers, and will certainly carry with it a *precedency* that will be quoted all over the American continent, and throughout the bee-keeping world. Mr. A. I. Root's offer of $5 toward the defense fund is kind and generous. If it be found necessary to get up a subscription list, I have no doubt that other bee-keepers in the United States will contribute to it.

Mr. Harrison has written me a letter commenting on my article on page 741, from which it would appear that the trouble arose out of a quarrel concerning a pig-pen. He says: "I kept bees on my place for some years before my neighbor came to live beside me, and he lived beside me eight years, never finding fault with me for keeping bees until I wanted him to keep his pig-pen cleaned out so that it would not cause sickness. He and his wife have always come through my bee-yard for water from my well, and the bees did not annoy them, neither did they at any time go into his kitchen to such an extent as to cause annoyance." Yet Mrs. McIntosh swore on the trial that the bees were troublesome when she was making preserves, and that she had to burn sulphur to stupefy them. Mr. Harrison says that Mr. McIntosh was stung three times; also, that the bees "sometimes swarmed on his place," but "did not annoy him." Mr. Harrison denounces Mrs. McInstosh's testimony as "a lie," and affirms that McIntosh was stung "through his own ignorance and carelessness." There is much more in the letter which indicates that a bad spirit had gotten into both blacksmith and bee-keeper, and but for this, in all probability, no lawsuit would have been instituted.

Now, we all know that bees can be very troublesome to house-keepers during preserve-making time. A single bee-sting may cause a great deal of pain. Few people, unfamiliar with bees, like to have them swarm on their premises. In view, therefore, of the facts he admits, I do not think that Mr. Harrison is justified in saying that the bees were not an annoyance to his neighbor. If, instead of taking this ground, and accusing Mrs. McIntosh of lying, he had pursued a conciliatory course, perhaps the difficulty would not have occurred. Suppose he had kindly instructed his neighbor how to avoid being stung, offered to provide Mrs. McIntosh wire-screens for her kitchen door and windows before preserving-time, and sent them a present of honey in consideration of his bees swarming on their premises, it is probable that they would have been mollified, and no litigation would have arisen.

I have a next-door neighbor who is not the best-tempered man in the world. One day last summer when I was in my little apiary, and he was working in his garden near by, he suddenly exclaimed, "There's a bee after me!" "Don't fight it!" I said. But I was too late with my advice. He had struck at the bee, and the bee had struck back, hitting him in the face. I was very sorry, told him what to do, and though his face swelled somewhat, he took the mishap very pleasantly. I gave him some honey as a *solatium*, and he has several times referred to his sting in the best of humor, always blaming himself for not knowing how to act when a bee threatened him. I have repeatedly said to him that I would move my bees to the farm if they were an annoyance to my neighbors, and he invariably replies that they are no trouble to him, although they have several times swarmed on his apple trees which adjoin my bee-yard. We often make our own difficulties by failing to act on the wise injunction, "If it be possible, as *much as lieth in you*, live peaceably with all men."

Mr. Harrison says: "As regards moving bees to try and please people, I tried that on this summer. I had scarcely got them moved before an ignoramus came out of the church near by, and exclaimed: 'It will never do to put those bees there; yesterday they were in the church by thousands.' I could not see what there was to attract bees into a place of worship, so I went to see if I could find out, and I could not find any bees nor anything to entice them there, so I concluded that the man was lying; so you see by trying to please everybody you will please no one." He adds: "If such people are to be allowed to get injunctions to restrain their neighbors from keeping bees, and trying to make an honest and honorable living, farewell to our liberties in Canada. We shall have to seek a home where people are a little more advanced in civilization. Since the suit I have been burned out and lost nearly all of my nice bees, and other things connected with the business, so that they will not require an injunction now. Parties were overheard to threaten to burn me out if I gained the case, but they have not waited for the final result, but have done it already. So you may judge in some measure what sort of people I have had the misfortune to live among. It is a deplorable state of things for the 19th century."

Yes, it is, but I doubt if the fault is all on one side. It is evident there has been a lot of contention and ill-feeling, resulting in exasperation. It is not strange that Mr. Harrison feels bitterly the loss of his little all, and his fellow-bee-keepers will deeply sympathize with him in the calamity which has befallen him; but it ought to teach us all a lesson of kindness and conciliation. Though Mr. Harrison is tempted to think the fire may be traced to revenge, there is no positive proof of this. It may have been accidental, and even if a revengeful spirit has been awakened, there seems to have been some provocation given—perhaps much.

Another lesson this case teaches, is the duty of insuring property. It is a mournful thing for an aged man to find himself deprived of house and home. Mr. Harrison says: "I am too old now ever to make up again. I never expect to have a home of my own in the world now." No wonder he tells us on page 762, "I am in a dilemma—nearly crazed." Notwithstanding any blame that may be justly chargeable to our afflicted fellow-bee-keeper, it seems to me that there is a loud call for a manifestation of practical sympathy, and I hope this will take some tangible shape at the forthcoming meeting of the Ontario Bee-Keepers' Association. At that time, also, no doubt measures will be adopted to defend the interests of bee-culture as affected by the suit now pending.

Guelph, Ont.

For the American Bee Journal.

The Season of 1886.

R. M. OSBORN.

Last April I doubled up 12 colonies, which left me 54 colonies from 66. I had 12 empty hives which I filled with bees, by natural swarming, in May. I find that increasing by natural swarming is more successful for producing honey than dividing; but dividing is the best if increase of colonies is desired. On the plan of natural swarming we get the bees with the swarming-fever all in the new hive, and leave contented young brood in the parent hive; and the bees with the swarming-fever, when put into a hive alone, will go to work with great energy. When we divide the colony while the swarming fever is on, the old, feverish bees are divided, and a portion of the feverish bees are in each hive, and they are not contented as well as they would be if all were in a hive by themselves, and no young bees or brood to bother them until they work the fever off, or work to death in a good flow of nectar.

The honey season with me was good only in May and June; there was no fall surplus crop of honey. As I am not physically able to properly attend and care for 66 colonies as they should be, and labor being high, and honey very low in price, I commenced on June 10 to prepare 54 colonies to be exterminated. On that day I took the queens out of the 54 hives, and on June 20 I took off all the queen-cells, and in the first week of July I administered sulphur smoke to the 54 colonies. I then took off all the comb honey in sections and extracted all the brood-combs, and melted the combs into beeswax. I got 2,160 pounds of honey from 54 colonies, and 80 pounds of beeswax.

I had selected 12 choice colonies out of the 66, to keep. From 6 colonies of pure Italians I took 349 pounds of surplus honey; and from 6 colonies of Syrio-Italians, 514. I left in each hive about 30 pounds to winter on. I prepared them for winter on the summer stands on Oct. 23. My honey crop was all gathered in two months from white and red clover, the whole crop being 3,023 pounds. I expect to increase my apiary next May to 24 colonies, that being all I am able to attend to by the aid of my wife and daughter.

Our zero weather commenced here on Dec. 2, and it was 8° below zero on Dec. 3. Snow was on the ground 6 inches deep. The last good flight that my 12 colonies had, was on Nov. 14.

Kane, Ills., Dec. 7, 1886.

For the American Bee Journal.

Legislation for Bee-Keepers.

DR. C. C. MILLER.

The following was written to me by Dr. L. C. Whiting, of East Saginaw, Mich.:

"As you wish an expression on 'the desirability and feasibility of obtaining legislation looking to the securing bee-keepers in their location as to territory,' I submit the following:

"Legislation should be founded in justice. Justice means equal rights for all. Mr. Heddon's priority of location only looks to the interest of the man who starts first. Apply this theory to any other business and see how it looks. Suppose, as is usual in a new country, that cattle are allowed to run at large, to graze on the unoccupied lands. One man starts in with stock enough to eat all the grass. If this theory is right, his prior claim (for which he has paid nothing) should be protected from all others desiring the same privilege. It looks to me as though any one coming into that neighborhood has the same right to turn his cattle on the commons, as the first locater had. It is the common right of all. When these cattle or bees injure the private property of the settlers, they (the settlers) make restraining laws to protect their private interests. A few have to give up their natural rights for the benefit of the community.

"Our statute books are filled with laws for the protection of one class of people against other classes. A large portion of these laws are unjust. It is claimed by some of our most eminent jurists, that all this class legislation is unconstitutional. For these and many other reasons, I am opposed to bee-ranch protection laws."

In securing such legislation as may be considered for the greatest good of the entire community, and I certainly would want no other, it is not necessary to concede anything to priority of occupation. Still, is not something almost universally conceded to the discoverer or first occupant? Probably the Doctor knows more than I do about our pre emption laws, and does not the first man who occupies the land have the best chance to obtain a title to it? Going back to our boyhood days, suppose the Doctor and I, when "little shavers," were out fishing together. He was seated on a projecting stump—only room enough for one to fish—and just as he begins to get some good bites, and to pull out the "shiners," I come along, and being a bigger boy, push him off and continue the pulling out myself. He is not the boy I take him for, if he does not clamor for his rights, and insist upon it that he has a right to the place because he was there *first;* and there may be no little temptation for him to depart from his home-training so far as to shy a stone at me by way of emphasizing his argument.

But, as I said before, there is no need to consider that prior occupation is an essential part of the data upon which legislation shall be based. Indeed, Mr. Heddon uses the right of priority as an argument against legislation. In a nut-shell his argument is this: I was here first. I have therefore a right here, and that right I can maintain well enough or better without legislation; therefore, no legislation is needed. I take the ground that if the first comer has the best right to the ground, legislation is needed to protect him in that right. Equally do I hold that legislation is needed if no rights be conceded to the prior occupant.

I am not sure but that the Doctor has illustrated the thing pretty well by the cattle pasturing on the commons. At first, land is so plenty and cattle so few that little attention is paid to territory, but as interests begin to clash, government steps in and marks out boundaries, saying to one man, "You can have this territory," and to another, "There is yours." Precisely this, and for precisely the same reasons, we need in bee-culture. If bee-keeping is to be a regular, permanent business, why not have the territory parceled out just as much as it should be parceled out for farming? Would it not be for the interest of the public at large?

Marengo,♂ Ills.

For the American Bee Journal.

Practical Hints for Bee-Keepers.

J. M. HICKS.

At this season of the year bees should be kept in perfect quietude and not molested in the least. Bee-keepers should study more carefully the nature and wants of their bees, and be able to apply such remedies as will most effectually overcome obstacles detrimental to the interests of the apiarist.

The winter problem seems to be the greatest trouble now, with many who have but recently commenced keeping bees, which, in order to succeed, should be carefully studied and put into practice so as to conform to natural laws governing the successful wintering of all farm stock.

"Time is money" to the bee-keeper, hence all implements for the apiary should be in proper condition and ready for the coming season.

Look well to the interests of the bees, and they will amply reward their keepers for all the care bestowed upon them.

Never allow your bees to swarm naturally, but use a good movable-frame hive, and practice dividing colonies, and thus save much valuable time.

Battle Ground,⊶ Ind.

Local Convention Directory.

1887. *Time and place of Meeting.*

Jan. 8.—Hardin County, at Eldora, Iowa.
J. W. Buchanan, Sec., Eldora, Iowa.

Jan. 11-13.—N.Y.State,E.N.Y., &c., at Albany, N.Y.
Jno. Aspinwall, Sec., Barrytown, N. Y.

Jan. 12.—Cortland Union, at Cortland, N. Y.
D. F. Shattuck, Sec., Homer, N. Y.

Jan. 12.—Nebraska State, at Lincoln, Nebr.
H. N. Patterson, Sec., Humboldt, Nebr.

Jan. 13.—Vermont, at Burlington, Vt.
R. H. Holmes, Sec,, Shoreham, Vt.

Jan. 13.—Sheboygan County, at Hingham, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.

Jan. 18.—N. W. Ills. & S. W. Wis., at Rockford, Ills.
J. Stewart, Sec., Rock City, Ills.

Jan. 19, 20.—N. E. Ohio, N. Pa., &c., at Andover, O.
M. E. Mason, Sec., Andover, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Late Brood-Rearing. — Frank A. Eaton, Bluffton,⊸ O., on Dec. 14, 1886, says:

The weather was fine and warm here from Dec. 9 to Dec. 11, and the bees had a nice flight. In removing the extracting frames from a chaff hive which I had neglected to prepare early, I found a fine patch of eggs in one frame; something I had never seen out-of-doors on Dec. 11.

Bees Packed in Chaff.—Dayton H. Carter, Clayton,⊙ Ind., writes:

My 10 colonies of bees are wintering nicely packed in clover chaff. We have not had much cold weather, but there is time enough yet for bees to freeze out. I have wintered bees three winters, and I have not lost any. I think that if everybody would pack their bees on the summer stands they would not lose so many; that is, if they will pack them rightly.

The Season in Nebraska.—James Jardine, Ashland,⊶ Nebr., on Dec. 13, 1886, writes:

I took my bees out of the cellar on April 9—over 100 colonies. I sold a few colonies in the spring, and the remainder did not do very much until about June 26, I should think. They carried in a fine lot of basswood honey and then the dry weather set in and they did not do much until late in the fall—until we had some fine showers, then they gathered honey from the heart's-ease and goldenrod until the frost came. I got about 2,600 pounds in all, first and second class honey, all in one-pound sections. Some of it is very nice and white, and some of it is very dark. What was gathered first is dark. I have come to the same conclusion as Mr. Stolley, of Grand Island, Nebr., viz: that we must sow more clover for our bees if we expect lots of honey. They must have the feed. I put my bees into the cellar on Nov. 15, and they all seem to be doing finely, the temperature being from 40° to 45°. I think that the cellar is just the place for bees in this country, where we have such severe storms and sudden changes. I think there is nothing gained by putting bees out of the cellar too early in the spring. Mine did nicely last spring; they had no diarrhea at all.

The Late Drouth in Texas.—L. B. Smith, Cross Timbers,♂ Tex., on Dec. 12, 1886, writes:

I commenced the season with 16 colonies, and sold 5, which left me 11. Bees in this portion of the country have gathered no surplus honey. It has been the poorest honey season since my recollection; in fact, I had to feed all of my bees through the latter part of the spring and early part of summer to prevent their starving. Nearly all the bees in this vicinity are dead. Of course the long continued drouth did it. Although it was a cold, backward spring, my bees built up to strong colonies, and were ready to gather nectar, if there had been any to gather; but at the time they should have been storing honey, they were fighting and robbing, so that it was almost impossible to open a hive at any time of the day without creating a general uproar in the apiary; since that time what few bees that were left have gathered abundant stores from the late cotton blooms, for their winter's feed. My bees are all on the summer stands.

Excellent Results.— Wm. B. McCormick, Uniontown,♀ Pa., on Dec. 15, 1886, writes:

After several years of disaster and discouragements, I have had one season of satisfactory results, though nothing in comparison with what I read about, but in excess of any I ever knew in this county. On May 1, I had 20 good colonies, most of which were Italians, and from them I obtained 1,400 pounds of comb honey (nearly all in one and two pound sections), and upwards of 50 swarms, all of which I saved, except one which absconded. I would like to have prevented so much swarming, but all my efforts proved fruitless, nearly all of my first swarms swarmed, and of course lessened the amount of surplus honey. One colony which did not swarm gave me 132 pounds of surplus. Mr. Phil Lesler, who lives about three miles from here, also did very well, having 70 colonies last spring. He obtained 3,000 pounds of comb honey, and as we are the only ones who pay attention to the business in this locality, we control the market, having agreed not to retail it at less than 20 cents per pound, nor less than 18 cents per pound for quantities over 30 pounds. At these prices we have disposed of our entire crops. I have also realized $55 on bees and queens. I feel somewhat elated over my success. I have now 40 colonies well packed on the summer stands, and 11 in the cellar. I was very much afraid, during the swarming season, that there would be complaints against me for keeping so many bees in the town, as there are streets on two sides of my apiary, with nothing but low palings between, and a grocery store just opposite. Frequently a swarm would fill the streets, and teams and persons would have to pass through them; several swarms settled on the trees in front of the grocery. But the neighbors seemed to enjoy the fun, and, to my knowledge, not even a horse was stung.

Bees Packed for Winter.—F. L. Merrick, Kankakee, Ills., on Dec. 16, 1886, writes:

The past season has been fully an average one here. I commenced with 8 colonies in the spring in fair condition. I had 15 swarms, and bought 4, which gave me 27, and they are in winter quarters in good condition. I had 3 fine swarms in May, and each of these gave me a large swarm in July. This is something new to me, but perhaps not unusual to old bee-keepers. These hives of three July swarms were boiling over with bees and honey before fall. A few of my old colonies gave me 40 to 50 pounds of surplus comb honey. After reading the views of the most eminent apiarists on "how to winter bees," I concluded to pack mine on the summer stands. I have them placed in a row on 2x4 scantling, the hives 8 to 10 inches apart, two quilts over the frames, and the caps filled with oat-straw and chaff; with the same straw and chaff packed under the hives, between them, and also some 10 inches packed thick at the back of the hives, and a good shingle roof over them, that will keep them perfectly dry.

Proper Temperature of Cellars.—Dr. G. L. Tinker, New Philadelphia, O., writes:

In reply to Mr. W. H. Stewart, on page 421, I will say that my observations of last winter, that 41° is the point at which bees hibernate most perfectly, are again confirmed. But Mr. S. does not agree with my finding, giving his experience of wintering in a bee-cellar in "a sandy hill," in which the temperature remained at 41° all winter without change. I have nowhere recommended that bees should be kept at this low temperature except in early winter. After Feb. 1 the temperature should be raised to 48° by artificial means, if necessary; not be allowed to remain through the early breeding season at 41°, as did Mr. S. "The sand froze solid all the way through the roof," and "the cold, frozen under surface," added a chilly dampness to the air, if not a lower temperature at times than 41°. There is nothing impracticable about raising the temperature of a bee-cellar by means of an anthracite coal stove. Had I been in Mr. Stewart's place I should have immediately put a stove in that cellar and drove out the frost that was seen to accumulate on the under surface of the roof. I have never known bees to winter well in frosty hives, and it seems to me a frosty cellar must be ruinous. No wonder he lost 150 colonies in such a place.

Dropping the Market Reports.—S. F. McClung, Niles, Mich., says:

I for one think it will not do to drop the market report in the bee-papers, for it is the only means we have of knowing the price of honey. We do not have to sell at the prices of commission-men, nor take their prices.

[Fear not, brother. This matter is to be fully discussed *before* any such important] and radical changes are even attempted.—ED.]

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 25	1 25
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 70
Canadian Bee Journal	2 00	1 75
Rays of Light	1 50	1 35
The 7 above-named papers	5 25	4 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	3 00
Guide and Hand-Book	1 50	1 30
Heddon's book, "Success,"	1 50	1 40

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Our Book Premiums.—To encourage all our present readers to get one or more additional subscribers we will present 25 cents' worth of books for every new subscriber (accompanied with $1 for one year's subscription), sent direct to this office. Thus for five new subscribers with $5, the getter up of a club gets $1.25 in valuable reading matter, to be selected by himself from our list on the second page of this paper. It will pay you to devote a few hours to the interests of the BEE JOURNAL. Every one who keeps bees ought to take it. We will furnish sample copies *free* in any quantity to those who intend to get up clubs. We expect to get 5,000 *new* subscribers for 1887.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Market is well supplied with all the grades, and the demand is light. Prices are nominal at 11@12c. for white in 1-lb. sections. Fancy white in scant pound sections, 13c. Very little extracted is being sold, and prices range from 4@7c.

BEESWAX.—22c. R. A. BURNETT,
Dec. 8. 161 South Water St.

NEW YORK.

HONEY.—In consequence of a large stock of comb honey on this market, fancy prices cannot be maintained. Fancy white honey in paper boxes, or glassed, are in better favor here than the unglassed honey, hence the difference in the price. We quote present prices as follows: Fancy white in 1-lb. paper boxes, or glassed, 13c.; same unglassed, 12c., and in 2-lb. glassed sections, 10@11c.; off grades 1 to 2 cts. per lb less. Calif. comb, 8@10c.; fancy buckwheat 1-lbs., 8½@9c., and 2-lbs. 7½@8c. Extracted white clover, none in the market. Calif. ext'd, 60-lb. cans, 5@6c.; buckwheat, in kegs and barrels, 4@5c

BEESWAX.—21@23c.
McCAUL & HILDRETH BROS.,
Dec. 7. 34 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c. Extracted, 6@7c.

BEESWAX.—25 cts. per lb.
Dec. 7. BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—The market is a trifle more active. Best white comb honey in 1-lb. sections, 11@12½c. Buckweat, 10c. Extracted, 7@9c.

BEESWAX.—23c.
Dec. 13. M. H. HUNT., Bell Branch, Mich.

CINCINNATI.

HONEY.—There is a quiet tone prevailing, but the demand is fair for choice comb and extracted honey, in small packages. Manufacturers buy very sparingly. The supply is large and prices are downward. We quote prices for extracted honey, 3@7c. per lb. Nice comb brings 12@15c. per lb. in a jobbing way.

BEESWAX.—Good demand,—20@22c. per lb. for choice yellow.

Dec.21. C.F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—The market is not very active and prices a little lower. Choice 1-lb. sections of best white sell at 13@14c.; second grade 1-lbs., 10@12c.; choice white 2-lbs., 11@12c. Extracted, slow at 6c.

BEESWAX.—Scarce at 25c.
Nov. 17. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The demand for honey is only moderate and the supply ample, of very fine quality and in extra good order. We quote choice 1-lb. sections of white at 12@13c.; 2-lbs., 11@12c.; dark not wanted. Extracted, white, in barrels, half-barrels and in kegs, 6@6½c.; in tin packages, 6½@7c.; dark, in barrels and ½-barrels, 5@6c.

BEESWAX.—Nominal at 25c.
Dec. 13. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—The market has been rather duller the last week, but prices are well maintained, particularly for choice white extracted and choice white comb honey, as both kinds are not freely offered. We quote: 3½@4¼c. for extracted, and 9@12c. for comb; with easier sales for the best grades, than for the darker honey, as none seem to be able to use the dark just now.

BEESWAX.—Dull at 19@22c.
Dec. 11. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c; amber, 7½@10c. Extracted, white, 4@4¼c.; amber, 3½@3¾c.

BEESWAX.—20@23c.
Oct. 18. O. B. SMITH & CO., 423 Front Street.

KANSAS CITY.

HONEY.—Demand is good for all grades, and receipts have been very large of comb and extracted. Home bee-men have kept out of the market until this month; having glassed every lb. section on both sides they are reducing prices, selling 60 lbs. of glass with 160 lbs. of honey, making our market lower. There crop is about 70,000 pounds. We quote: White clover 1-lbs., 12@13c.; 2-lbs., 11c: ½-lbs., 13@14c,; dark 1-lbs., 10c.; 2-lbs., 8@9c.—California 2-lbs., 9@11c. Extracted white clover, 6c.; dark, 4@5c.; white sage Calif., 5½c.; amber, 5c.

BEESWAX.—22c.
Nov.20. CLEMONS, CLOON & CO., cor. 4th & Walnut.

ST. LOUIS.

HONEY.—Choice comb, 10@12c.; latter price is for choice white clover. Strained, in barrels, 3¾@4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted in barrels, 4¼@5.; in cans 5@6c. Market dull.

BEESWAX.—Firm at 20½c. for prime.

Dec. 20. D. G. TUTT & CO., Commercial St.

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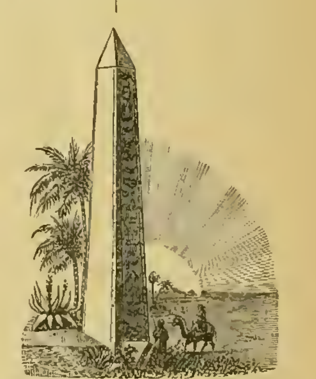

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Reader, do you not just now think of one bee-keeper who does not take the Weekly BEE JOURNAL, and who should do so? Perhaps a word or two from you will induce him to do so. Will you not kindly oblige us by getting his subscription to send on with your own renewal for next year? When you do so, please select any 25 cent book in our list, and we will send it to you post-paid, to pay for your trouble. We are aiming to get 5,000 *new* subscribers for 1887, —will you not assist us to obtain them?

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result —a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

◆

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two *new* subscribers besides his own, with $3.00, for one year, we will present a copy of this valuable book.

◆

New Subscribers are coming in rapidly —for this our thanks are tendered to the friends of the AMERICAN BEE JOURNAL, who are exerting their influence in its behalf. We should thribble our list at the present low rate of *one dollar a year.* We hope every one of our present subscribers will send at least one additional subscriber with the renewal for 1887.

◆

We refer our Subscribers to our offers of premiums and net club rates for new subscribers, and if they will send us one or more subscriptions from among their neighbors who are interested in bees, they will get the premiums or Cash reductions as they may indicate—to pay for their trouble; and at the same time they will be enhancing the usefulness of the JOURNAL and contributing toward its prosperity.

◆

Preserve your Papers for reference. If you have no **BINDER** we will mail you one for 60 cents, or you can have one FREE if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

◆

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

◆

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.25.

◆

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for $1.50.

More Premiums.—Mr. L. J. Diehl, of Butler, Ind., offers a colony of Italian bees as a present to the person sending to this office the largest club of subscribers for 1887. The subscriptions may be sent in at any time before the first of May at our regular club rates, and additions made as desired, but it must be stated that you are working for that premium, so that we can keep account of the subscriptions.

As a premium to the second largest club we will send my mail, postpaid, a copy of the "Farm Account Book," worth $3. The postage is 20 cents.

◆

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

◆

We anticipate a largely increased list of subscribers for 1887, as $1.00 cannot be invested by any bee-keeper that will bring him better returns.

◆

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

◆

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1¾c. per light, extra.

◆

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

◆

Do you Want a Farm Account Book? We have a few left, and make you a *very tempting offer.* It contains 166 pages, is printed on writing paper, ruled and bound, and the price is $3. We will club it and the Weekly BEE JOURNAL for a year and give you both for $2. If you want it sent by mail, add 20 cents for postage.

◆

Frank Cheshire's new book on Bees and Bee-Keeping, can be had at this office.—Vol. I, bound in cloth, $2.50, postpaid.

◆

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices :

Single copy, 5 cts.; per doz., 40 cts.; per hundred, $2.50. Five hundred will be sent postpaid for $10.00; or 1,000 for $15,00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

◆

E. Duncan Sniffen, Advertising Agent, 3 Park Row, New York, inserts advertisements in all first-class Newspapers and Magazines with more promptness and at lower prices than can be obtained elsewhere. He gives special attention to writing and setting up advertisements in the most attractive manner, and guarantees enetir satisfaction. In all his dealings, he is honorable and prompt. Send for his Catalogue of first-class advertising mediums. Mailed free. 52A40t

◆

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows :

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

◆

Fifty-Two Dividends from the investment of one dollar is just what every subscriber of the AMERICAN BEE JOURNAL receives. Can any better interest be found for the Investment of one hundred cents? If so, where?

◆

Catalogues for 1887.—Those on our desk are from

David Landreth & Sons, Philadelphia, Pa. —the oldest seed-house in America.

Z. DeForest Ely & Co's Garden Almanac and Seed Manual, Philadelphia, Pa.

◆

Frank Leslie's Sunday Magazine for January, 1887, contains a beautiful frontispiece entitled "For the Pastor'" which is a real art gem. The new serial story, "His Badner over me," by F. A. Matthews, begins in this number. It is a very fine Christmas number.

◆

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

Advertisements.

THE CHAPMAN HONEY PLANT.

Having expended thousands of dollars in bringing before the people one of the most wonderful honey-producing plants known in the United States, or even in the world, and testing it honestly and fairly, wish to say through your valuable JOURNAL that the seed contains so much oil that nothing but fresh seed will grow, or by thrashing, if the seed is bruised or broken, it will not grow for this reason. And by the advice of many prominent bee-keepers, I have decided to sell the limited amount of seed I have raised this season at the following prices, and will send to those who have already ordered the amount of seed due them at this low price: One half ounce 50 cents; 1 ounce, $1; 2 ounces, $1.50; 4 ounces, $2; ½ pound, $3; 1 pound, $5. One pound of seed is sufficient for half an acre, if properly thinned out and re-set. Write all orders plainly, and give your post-office in full.

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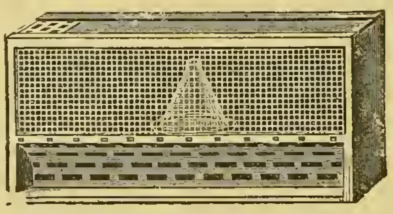
Alley's Drone and Queen Trap.



Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (13 in all), $3.50; 50, in the flat, $12.00. Address,

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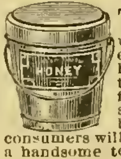
NEW ONE-POUND HONEY PAIL.



THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned-over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **PRICE, 75 cents per dozen, or $5.00 per 100.**

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IMPORTED Italian Queen in full Colony, only $8.00 —O. N. BALDWIN, Clarksville, Mo.
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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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